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Smidig design av brukergrensesnitt for presentasjonsverktøy

Anders Kjøllesdal

Industriell design
Innlevert: Juni 2012
Hovedveileder: Trond Are Øritsland, IPD

Norges teknisk-naturvitenskapelige universitet
Institutt for produktdesign

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PREFACE

This report describes the design and development of Slidedog, a software launchpad for seamless presentations. It is the outcome of my master's thesis in industrial design at the Institute of Product Design at NTNU.

There have been many people involved in the process who have provided guidance and insights along the way, and who ultimately helped shape Slidedog into the product presented here.

Thanks go out to all those who have contributed, either by taking the time to share their experiences and answer some strange questions, or friends, fellow students and colleagues who have provided input and been willing corridor test monkeys. Start NTNU, who dared to use a program fresh off the shelf in front of 500 people, and all those users who have tried out Slidedog and given their feedback.

Special thanks to Trond Are Øritsland for the continuous guidance, and for keeping the project from veering too far off track.

Of course, the project wouldn't have existed without Magnus Jensen and Dag Hendrik Lerdal at Preseria. They not only provided a challenging and rewarding thesis project, but also a great team to work with. Without their dedicating months of development work, Slidedog would never have made it into the hands of users.

Anders Kjøllesdal
Trondheim, June 11. 2012

SUMMARY

This document describes the thesis project "Lean design of a user interface for interaction software", done at the Department of Product Design at the Norwegian University of Science and Technology (NTNU).

Presentations are a source of major usability problems, not only at the scale of large conferences and conventions, but at a smaller scale of meetings and lectures, down to the individual level. In many of these settings, issues with connectivity between software and displays, file support and playback commonly cause interruptions and delays. Consequently, both the delivery of the presenter and the audience experience suffer.

The project has been done in collaboration with Preseria AS, a startup company in Trondheim, Norway, whose focus is on presentation software development. The project work builds on Preseria's existing technology platform that supports all common presentation media formats, allowing seamless switches between files and a smoother execution of events with multiple presenters.

The project represents a new direction for Preseria, both in terms of target users and their business model. The overall goal for the company was to move away from their current role of delivering software used by technicians at large events and conferences, to a position where they could reach consumers and presenters directly.

Part of the designer's role in this process was identifying potential user groups, discovering their needs and building empathy. This process involved both looking at the users from a system/serivce perspective in terms of archetypes and user roles, but also observations, interviews and tests with real users.

The project work included designing and and building a functional beta version of the software at an early stage in the process. This was founded on core assumptions about user needs, target users and the the growth potential of the offering. Releasing the product to the public allowed testing of these hypotheses against actual usage and opened up new channels for feedback.

On the basis of this user response, a second version of the software was designed, shifting the focus from the needs of individual presenters, to a tool for easily and seamlessly managing the presentations of multiple speakers. This iteration provided a more thourough exploration of the interface, from the underlying architecture to the look and feel of the product.

Slidedog is a product that addresses some of the most basic needs for both event organizers and presenters, providing predictability, flexibility and security in excecuting shows. It is a presentation launchpad that can be used to collect and organize the presentations of multiple speakers in a matter of minutes, and ensures seamless playback.

The interface of Slidedog is designed with responsiveness and immediacy in mind, giving the user a sense of control. Keeping the functionality focused and limited allows inexperienced users to pick it up quickly and use it with confidence. This aims to lower the threshold for use in live presentations, hopefully providing value to a wide range of users.

The project was done in close collaboration with the developers at Preseria which allowed the design and release of fully functional software. The design approach was based on lean principles, exploring the designer's role as an active contributor within small development teams.

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Masteroppgave for student Anders Kjøllesdal

Smidig design av brukergrensesnitt for presentasjoner

Lean design of a user interface for presentation software

Oppgaven gjøres i samarbeid med Preseria AS, et norsk softwareselskap med utspring i NTNUs Innovasjossenter Gløshaugen, som utvikler løsninger for konferanser, møter og presentasjoner. Oppgaven omhandler Preseria Presenter; et program for sluttbrukere som holder presentasjoner eller forelesninger.

Programvaren er i en tidlig beta-fase, med deler av den underliggende strukturen implementert. Fokus er på å tilføre relevant funksjonalitet og forbedringer av grensesnittet på bakgrunn av innsikt fra brukere, men med hensyn til de begrensninger som ligger i et reelt case. Oppgaven vil utforske muligheter for å tilpasse interaksjonsdesignerens arbeidsmetodikk til smidige utviklingsprinsipper, preget av hurtige iterasjoner og tett samarbeid.

Presentasjoner av digitalt innhold er i dag en etablert del av alt fra styremøter og konferanser til klasserommet, men er likevel ofte preget av tekniske hindere som avbryter flyt og begrenser opplevelsen. Oppgaven tar sikte på å forenkle hvordan man setter sammen presentasjoner med ulike typer media, og hvordan formidlingen av disse kan forbedres. Programmet vil brukes i en krevende situasjon der man ofte kan være nervøs og stresset, og hvor fokus er på kommunikasjon av innhold snarere enn programvaren. Dette stiller ekstra høye krav til brukervennlighet og forståelighet av grensesnittet.

Oppgaven vil bestå i å definere brukerens interaksjon med, og opplevelse av programmet gjennom utforming av det grafiske grensesnittet og den underliggende strukturen. Løsningene vil bearbeides iterativt på bakgrunn av feedback fra forskjellige brukere.

Oppgaven vil blant annet omfatte:

- Kartlegging av brukergrupper og brukskonteksten til løsningen
- Kartlegging og prioritering av relevant funksjonalitet
- Utvikling av interaksjonsprinsipper og informasjonsarkitektur
- Utforming av grafiske grensesnitt i programmet
- Brukertesting av prototyper

Oppgaven utføres etter "Retningslinjer for masteroppgaver i Industriell design".

Ansvarlig faglærer : Trond Are Øritsland
Veileder: Trond Are Øritsland
Bedriftskontakt: Dag Hendrik Lerdal

Utleveringsdato: 16. januar 2012
Innleveringsfrist: 11. juni 2012

Trondheim, NTNU, 16. januar 2012

Trond Are Øritsland
ansvarlig faglærer

Jon Herman Rismoen
instituttleder

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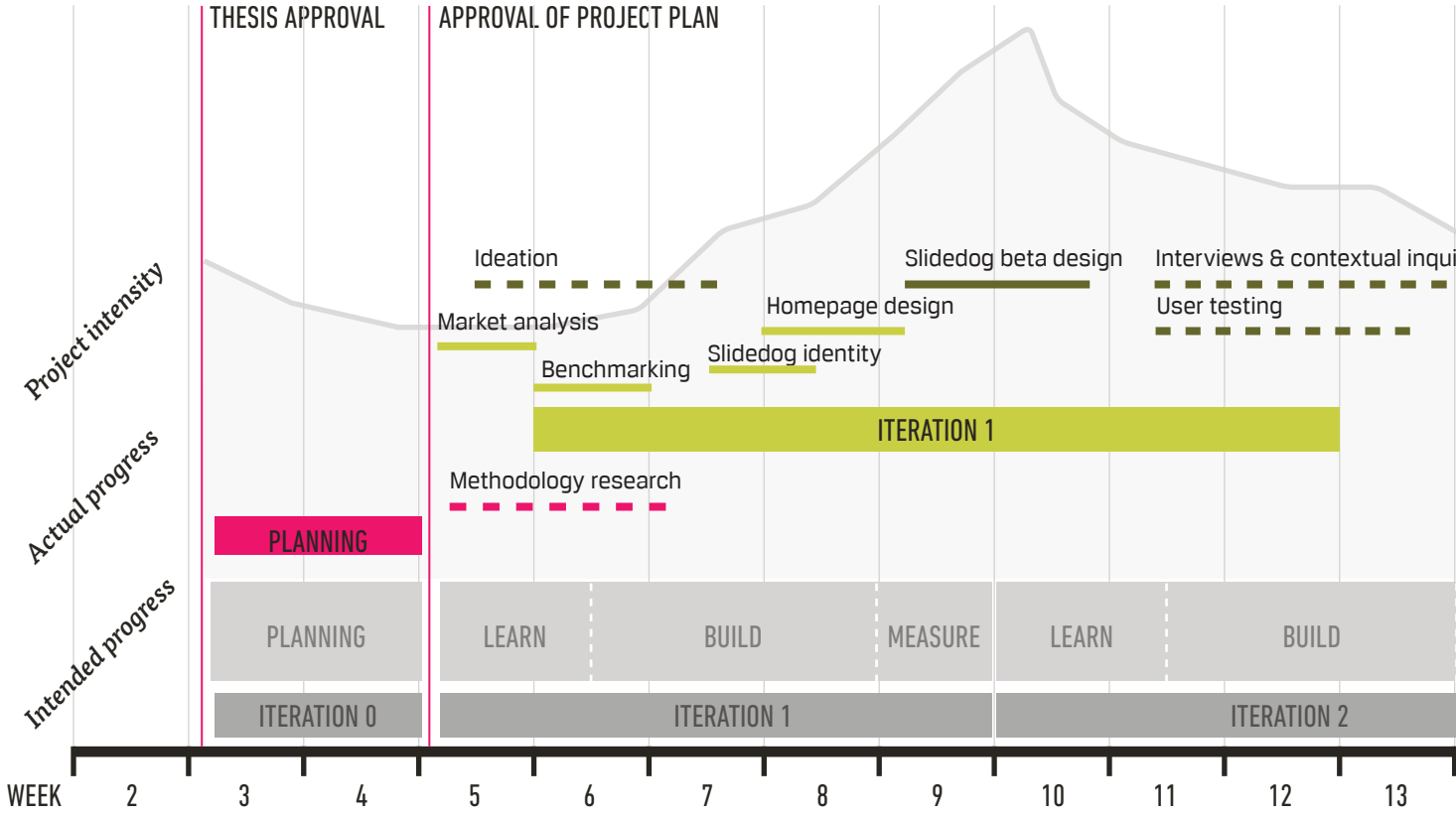
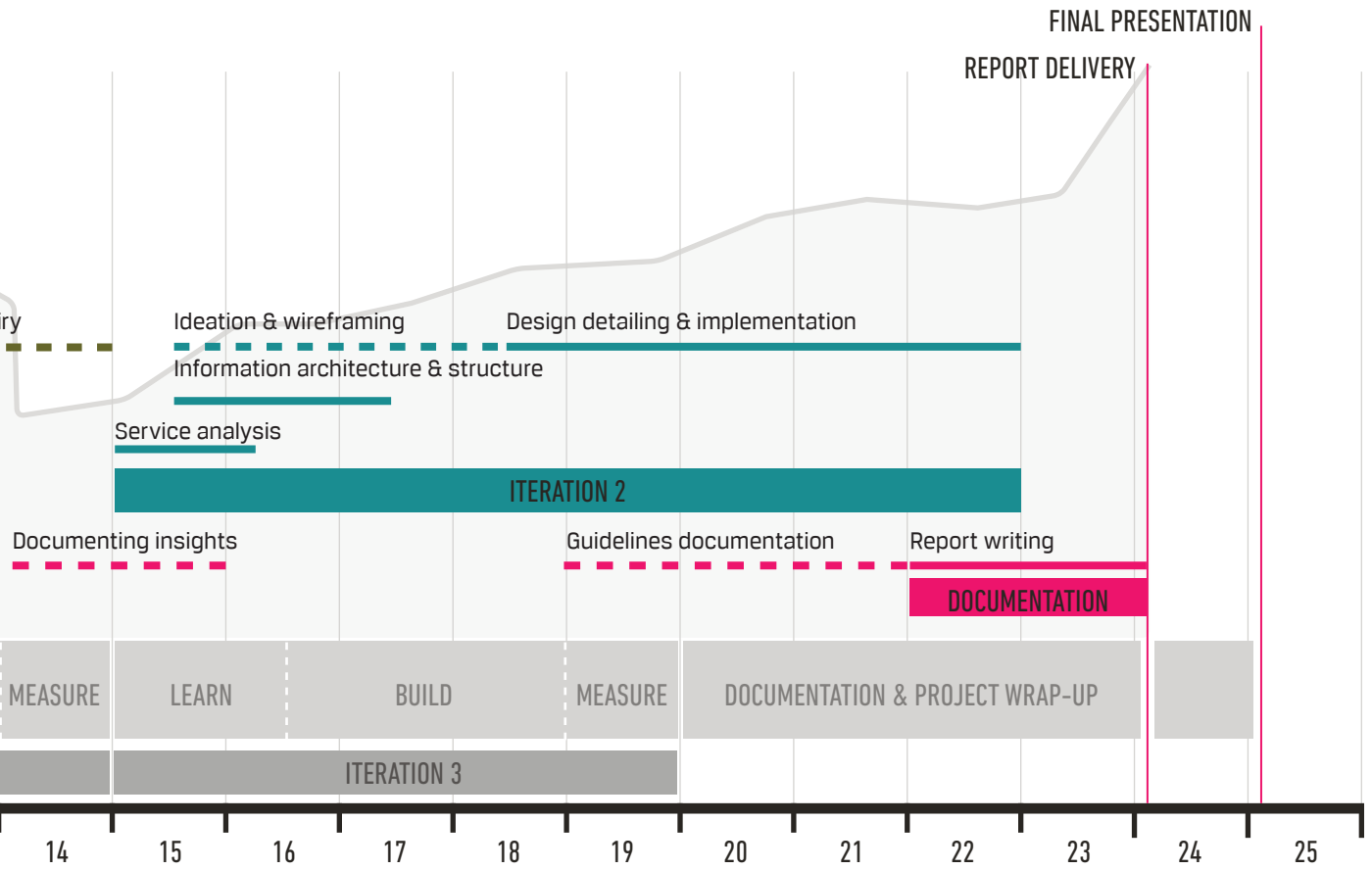
PROJECT PLAN

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PERSONAL MOTIVATIONS

Over the last couple of years I have had the chance to work on interaction design projects both as a part of a large in-house team and as part of a consultancy for external clients, in addition to personal and academic projects. I often felt a low degree of control over the end results in these projects, in part because of the long road from design to implementation, and in part because I lacked a solid understanding of the technical development process. This provided motivation for a thesis project based on close cooperation with developers.

This process of software development seemed fuzzy compared to the tangible production lines, tooling and material costs that go into the production of a physical product. One of the goals entering the project was to work towards the realization of actual working software, and in the process gain insight into the how's and what's of software development. I felt like there were real benefits to be had in working closely with programmers throughout the development, instead of passing on the baton in the form of specs, screenshots and styleguides at the end of the design process.

A contributing motivation was to gain a better understanding of the commercialization process of software. When working with physical products, this process from concept to production can be time-consuming and technically demanding, but the steps are at least tangible. These same steps in software development are often hard to decipher for a layperson without a good understanding of programming. In effect, a lot of the potential opportunities or roadblocks remain invisible to the designer.

I was lucky enough to come in contact with Preseria, a software startup, who saw the potential of a project based on close cooperation. They were at the time close to launching an early private beta of their new product, and aiming to hit the market with it before summer. The goals and timelines of the two projects converged well enough that we were able to mutually benefit each other, cooperating to a point where eventually the work on the thesis became defining for a large part of the new product.

ABOUT THIS DOCUMENT

This report documents the project chronologically, where the order of the chapters generally reflects the order in which things happened. Often several topics would be worked on in parallel, such as the contextual inquiries and user interviews overlapping, or the mental models and interface structure being refined over the course of the interface detailing and implementation. In these cases, the topics are kept separate in the report for clarity.

The report in itself is somewhat contradictory to the ideas of lean design. It is documentation for the sake of documentation, whereas lean design principles encourage ways of efficiently bringing a product or service to realization and into the hands of users. This allows feedback from real-world usage to drive the process from an early stage, rather than relying on assumptions and analysis.

The majority of the project work was very hands-on, with the design process intimately tied to the technical development and implementation. With this close collaborative nature of the project, the primary purpose of the analysis and research was as internal medicine. Many of the ideas presented here were only developed to the point where they could be communicated within the team, and tested on the working product to see their effects first-hand.

Consequently, much of the documentation that makes up this report was done post-humously. In many cases, analysis, maps or models shown in the report were only in the shape of notes or figures during the actual process. This document attempts to flesh out and tie together the ideas that drove the project in order to give external readers some overview over the process. Nontheless, it may appear disjointed or incomplete as a result of it's conception.

It is strongly recommended for readers to try out the programs first-hand, and use the report as a supplement. These programs were the primary focus of the project work, and in many cases they do a better job of conveying their purpose and interactivity than can be described on paper.

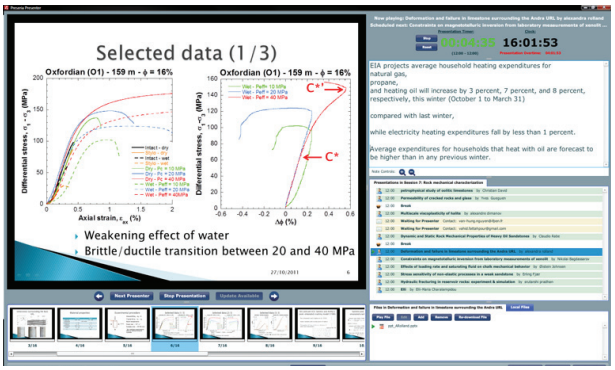
BACKGROUND
PRESERIA

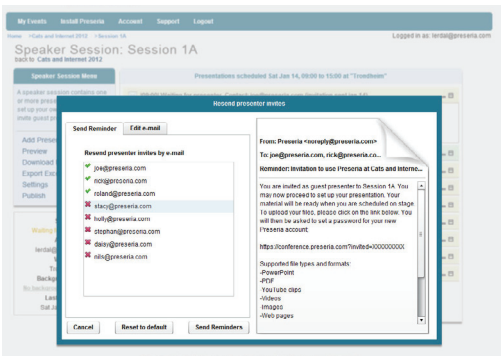
THE COMPANY

Preseria AS is a software development start-up founded by Magnus Jensen and Dag Hendrik Lerdal in 2008. It's located at the incubator Innovasjonssenter Gløshaugen and is owned in part by the Technology Transfer Office at NTNU.

The company is focused on developing software solutions for managing and excecuting presentations, in particular running large events and conferences. Their core product, Preseria Conference, has been on the market since 2008, and is used by several large Norwegian companies such as Statkraft, Sintef, NTNU, PriceWaterhouseCooper, and Evry.

Magnus Jensen and Dag Hendrik Lerdal, the two founders of Preseria AS





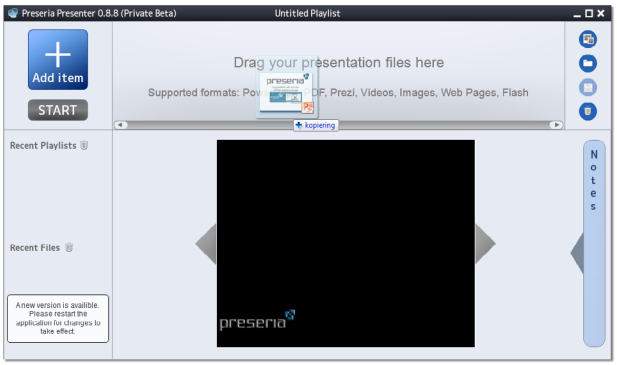
The presenter module of Preseria Conference left, the web administration interface right

PRODUCTS

Preseria Conference is a platform solution, featuring an online component for inviting speakers and uploading presentation files, and a presentation module for playing the files seamlessly. It is primarily designed for larger multi-speaker sessions where a technician is responsible for the execution. It's sold as a business-to-business product with an annual licensing model, requiring an active sales effort.

A second product based on the same technology has been in development since the summer of 2011, tenatively named Preseria Presenter. This is an adaptation for mass-market and consumer use which aims to simplify the technologly and make it more widely available. The product is intended for smaller events or individual presenters. This product has been the focus of the thesis project.

PROJECT STATUS
PRESERIA PRESENTER



Preseria Presenter Beta, as it looked before the start of the project. The left side shows an empty editable playlist, while the right picture is a presentation in progress.

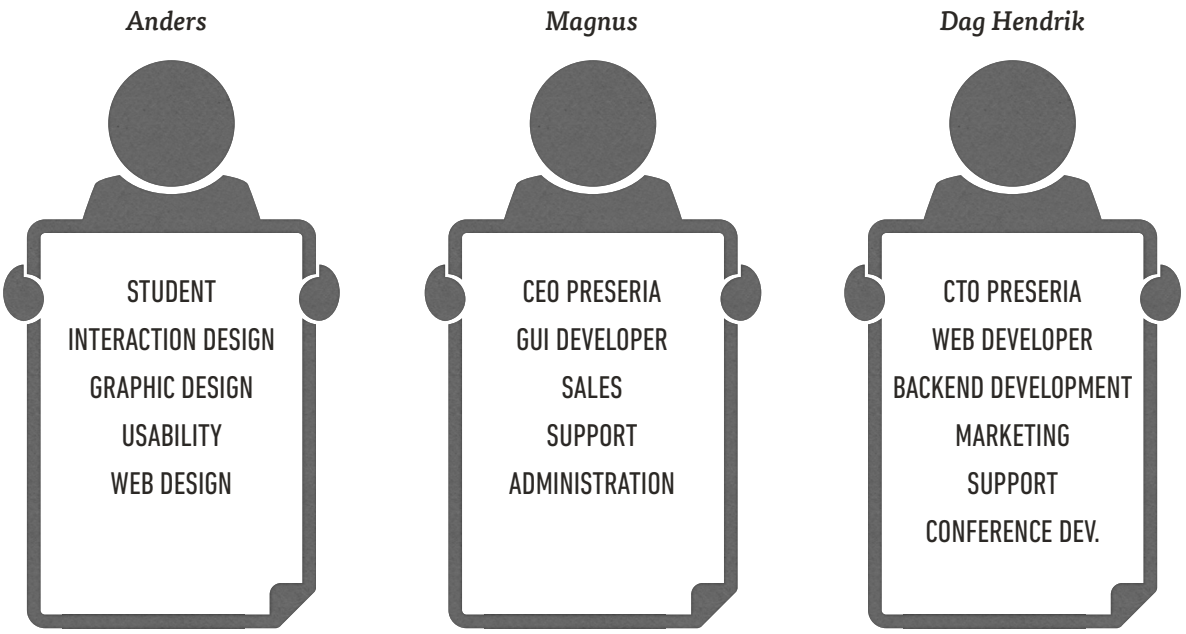
From a technical point of view, Preseria Presenter was a largely functioning product at the start of the project, although it was severely buggy. File support was in place for the most common presentation formats, and you could drag and drop files into the playlist, order them and present live on a second monitor.

However it didn't look like a functional or finished product, lacking both polish and consitency in the user interface. Some concept work had been done on the interaction design and user interface the previous summer, which laid the foundations for the current state of the application.

The core element of Preseria Presenter was the playlist, which is what set it apart from both Preseria Conference and traditional presenter's tools like Powerpoint. This allowed an easier way of managing multiple files in a presentation, coupled with the seamless playback and switching that was already in place through Conference.

The interface featured two distinct views; one for editing and one for presenting, and had a panel-based layout where these would be collapsed when starting a presentation.

PROJECT ROLES



THE START-UP REALITY

The project had many practical aspects beyond just those of the hands-on design and development, strongly influenced by the realities of running a start-up business.

Tackling all of these aspects meant working multidisciplinary, and each of us having to juggle multiple roles and shifting focuses.

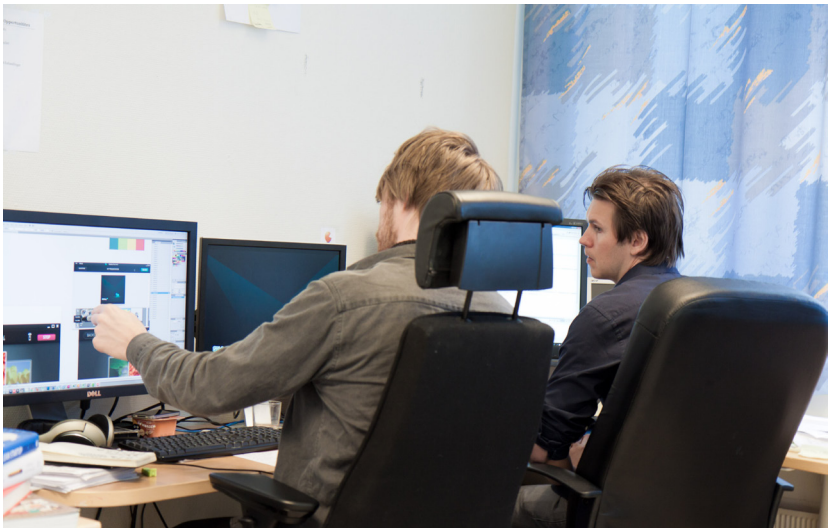
Preseria as a company had to focus on both the continued sales, development and support of their existing Conference software, as well as the various aspects of commercializing a new product.

Personally, the project on my involved the sometimes conflicting roles of tackling a range of real-world design tasks as a part of the team, versus the academic perspectives of the project as a master thesis.

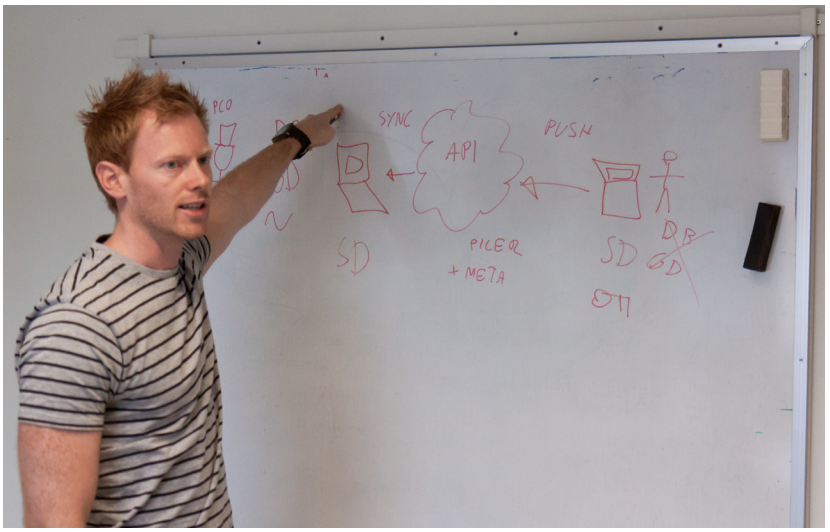
ROLES IN THE SLIDEDOG DEVELOPMENT

We quickly settled into a team dynamic with distinct roles in the Slidedog development. Magnus and I cooperated on the front-end of the program, more or less sharing the same desk. In the early stages of development, the work was somewhat separate but still focused on the same overall topic. As we got into the gritty details, the process became more or less like a dialogue, designing and implementing and revising features in parallel.

Dag Hendrik worked on the backend development, such as performance increases, code optimization and file handling. He was also in charge of the development of the remote app, which was kept largely separate from the GUI design. Much of the user feedback and responses received online went through Dag Hendrik, and would later be shared with the team.



Discussing the details of the interface design with Magnus



Dag Hendrik explaining the plans for the remote app development

Endless lines of code, gradually appearing a little less cryptic

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METHODOLOGY

As mentioned previously, the project was in part motivated by a desire to adapt my design approach to lean methodology, away from deliverables and towards being part of building functional software. The foundations of this lean approach are briefly detailed here.

While lean thinking provided a new mindset for the project work, it is not a new toolbox. The project builds on the same interaction design foundations as any other project, although they are not explicitly discussed in this document.

Lean thinking does however encourage a more situational and conscious use of the tools available. Rather than treating them as checklist items to be completed, a lean mindset begs the question of how tools or activities contribute to value for the end user.

The approach was a learning process both for myself and for Preseria, and some reflections are given at the end of the document.

METHODOLOGY

LEAN DESIGN

ORIGINS

Lean as a concept is traditionally tied to large-scale industrial production, originating with the Toyota Production System developed by Taiichi Ohno and Shigeo Shingo.

More recently, lean principles have seen application in other disciplinces, both as a philosophy for entrepeneurship, as a subset of agile programming, and in a lean approach to interaction design and user experience.

Perhaps most defining characteristic of lean manufacturing is it's focus on reducing waste without sacrifing customer value, through processes like JIT or just-in-time production. However, achieving this requires insights into the values and needs of customers.

Genchi gembutsu, one of the core phrases in the lean manufacturing vocabulary of Toyota, roughly translates to "Go and see for yourself". This idea of validating business (or design) problems with first-hand knowledge from the real world is one of the defining principles not only of lean manufacturing, but also for a lean approach to design and entrepeneurship.

AGILE PROGRAMMING AND LEAN DESIGN

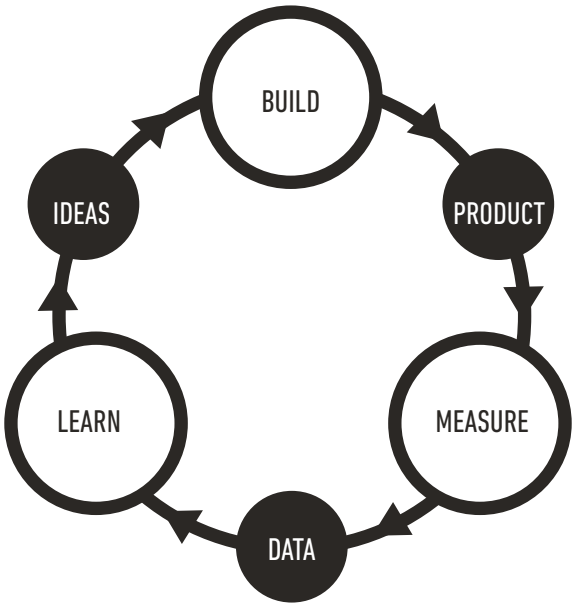
Software development practices have recently been shifting from a linear waterfall-approach with long cycles heavy on deliverables and documentation, over to agile practices with short iteration times and lightweight documentation.

In order to function within these agile environments, the approaches of designers have been shifting as well. This toolset and approach is commonly termed Lean UX or lean user experience design, although it's methods are still a subject of debate.

Perhaps the most cruicial aspect of lean design, is that it's intimately team-oriented. The designer takes on a role as part of the development team, sharing, validating and exchanging feedback with the team continuously instead of at the end of a long period in isolation.

This ensures that the design stays on track, and allows the implementation to start earlier. In the words of Tim McCoy, the value of lean design is that *It focuses design and development effort on high value users, features, activities, and experiences, and in so doing, reduces the wasted effort and cost of spending time on issues that don't really matter.*

> *"Lean thinking defines value as providing benefit to the customer; anything else is waste"*
>
> *Eric Ries*



The build-measure-learn feedback loop at the core of the lean startup model described by Eric Ries.

THE LEAN STARTUP

These ideas have been adapted and expanded to form a framework for start-up businesses working under conditions of high uncertainty and with limited resources. This has most notably been described by Eric Ries in his book *The Lean Startup*. Preseria were already advocates of this approach, and we looked for ways to adapt it to the design process.

Two of the funamental concepts of the lean startup approach are the Build-learn-measure feedback loop shown in the diagram above, and the concept of the Minimum Viable Product (MPV). The feedback loop describes an iterative process with three main stages, and the focus or end result of each stage.

This is similar in nature to the iterative design process, but while engineers and designers often focus mainly on the build phase, lean startup thinking places equal emphasis on each. Particularly important is the concept of validated learning; where the real-world usage of a product or a service becomes the key unit of progress.

In order to achieve this validated learning, the lean startup mindset encourages getting a product or service into the hands of consumers as quickly as possible. This is coined the Minimum Viable Product or MVP, and although it may be lacking or incomplete, it will allow testing of the fundamental assumptions that the business or product are founded on.

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IDEAS & INSPIRATION

The early inspiration and research phases were comparatively short before moving into actual development. The first few weeks of the project were a process of building a contextual understanding of the end product, users and setting, the latter two of which are described in subsequent chapters.

This understanding took some time to cement, and not before reaching a few dead ends. Many of the early ideas spun around new ways to create presentations, and had little direct relation to Preseria. Gaining a better understanding of the technology platform Preseria were developing gave the ideas a new anchoring within the project's boundaries, and it allowed a more efficient exploration of the possibilities for the project.

Ideation and inspiration were of course present throughout the process, and as the work became more concrete, the inspiration got more literal. Part of this process was looking at the details of other interfaces and extrapolating the insights and motivations that inspired them.

INSPIRATION

OBJECTS IN THE WORLD

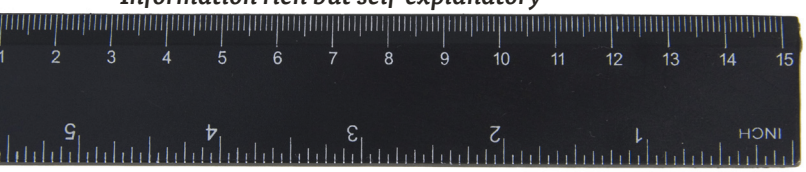
A companion; contrast between the container and the content

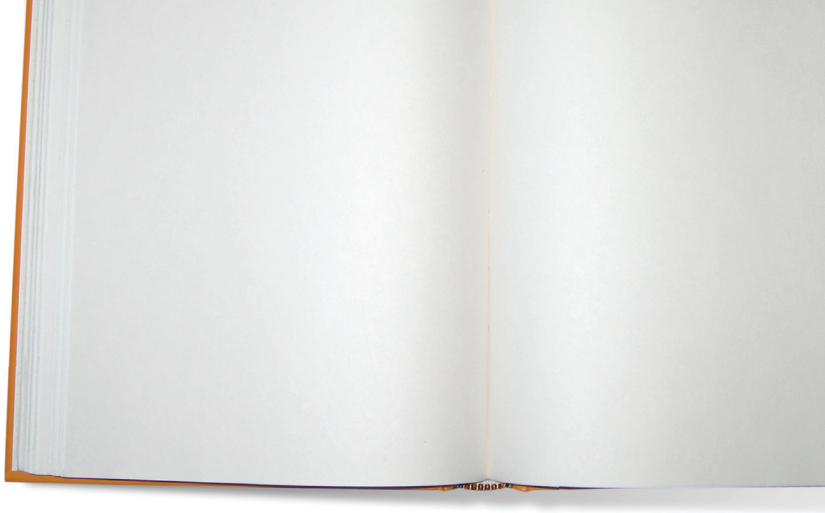
Utilitarian, portable, complex creation through simple tools

Visual presence, immediacy, non-commital

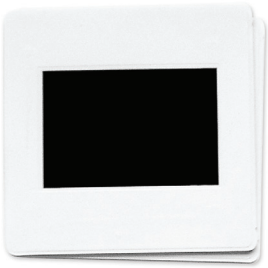
Always available on-demand, non-stressing,

Information rich but self-explanatory





Invites focus, neutral container for content



Simple media container; portability, sequencing

Structure through repetition, different formats

Pure information, overview, clarity

Reduction, simplicity, freedom

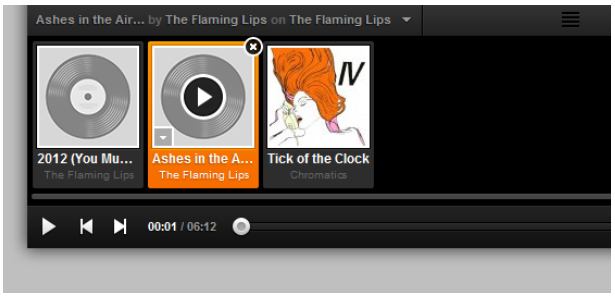
Anticipation, immersion, shared experiences

INSPIRATION
INTERFACE DETAILS

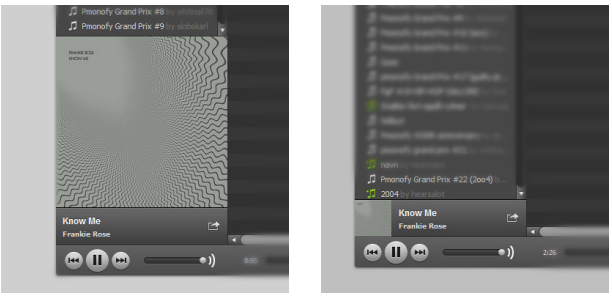
There is currently no other software in the same niche as SlideDog, and the solutions that exist do not appear to share the same focus on interaction and usability. Rather than looking at similar programs directly for guidance, we found inspiration looking more broadly at the subtle details of otherwise unrelated products. These are the types of details that often are not immediately visible, but register semi consciously and lift the overall user experience. They also generally reflect a considerable amount of time and effort invested in usability; the fine-tuning and tweaks that add a high level of polish to already working foundations.

In a sense, this approach allows small teams such as Preseria to take some shortcuts. Instead of reinventing every wheel and cog in the product, seeing what works for others and extrapolating it to the Slidedog context might allow the product to reach a high level of polish faster. The details may not be directly applicable to Slidedog, but they often reveal a lot of the thought process and insights behind other products. These are efforts by other teams to bring the interfaces to life, and they can be valuable learning.

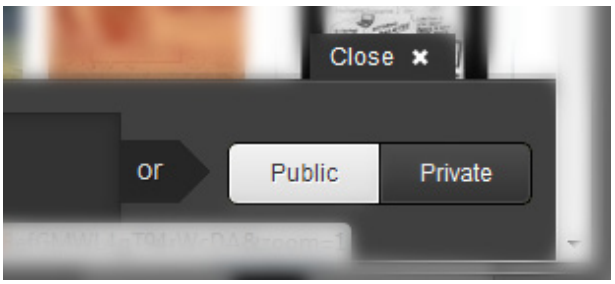
We mainly looked to other programs that have some kinship to Slidedog, such as media players or presentation tools, but also more generally at successful UI patterns.



Grooveshark: Playlist design where contextual actions are available directly from the songs rather than from a toolbar.



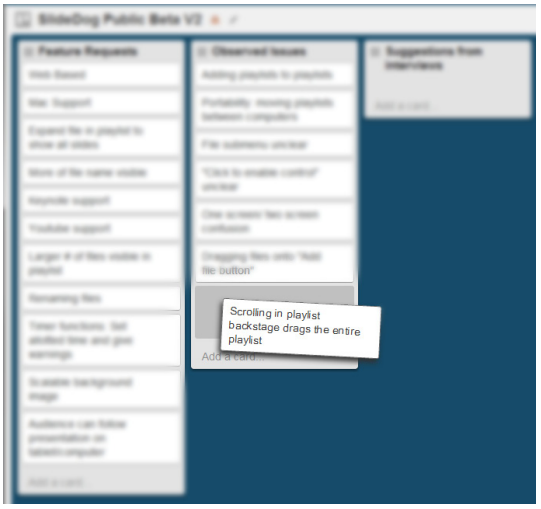
Spotify: Fluid transitions between minimized and expanded visuals. Sublte details like the animated volume icon, or color grading playlist items based on their age.



Gimmebar: Choices presented in a dialectical manner eases decisions.

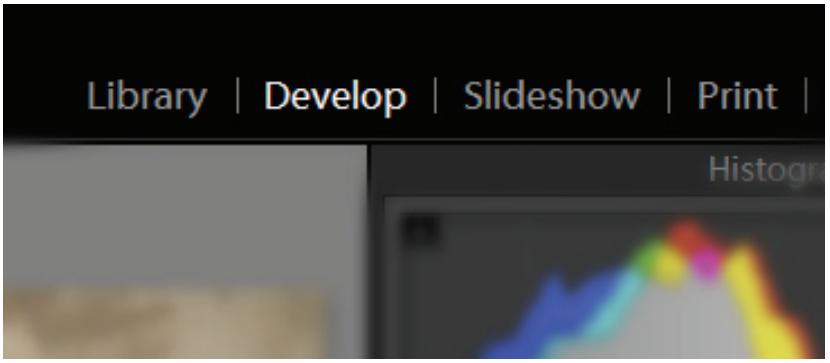
iTunes: The content centered scrolling sequence in cover flow. Perspective distortion allows more elements to fit in a given area. Works even better for visual content than music.

Pennant app: Enjoyable scrolling interactions, and information rich interface that doesn't feel cluttered or unfocused.

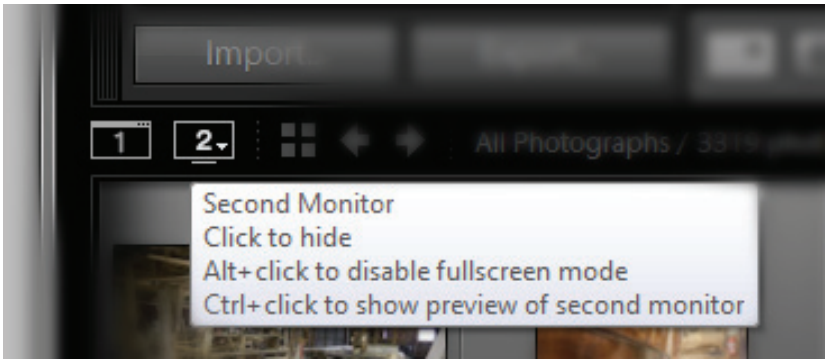


Trello: It's efficient solutions for working with lists. The ease and non-commital nature lowers the threshold of use, and makes it preferable to the competition even if it has fewer features. Simple but effective visual cues afford moving and manipulating list objects.

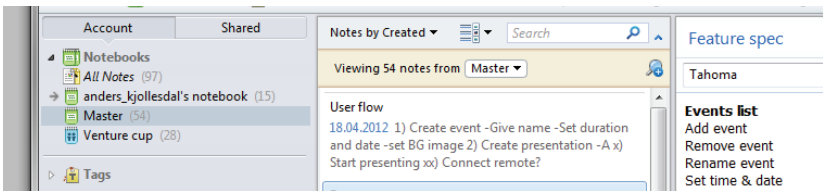
INSPIRATION
INTERFACE DETAILS



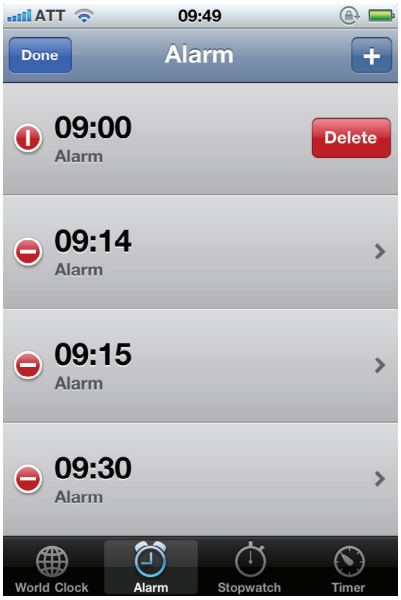
Lightroom: The room-based organization of the program that structures tools around specific tasks and implies a direction to the workflow. Color scheme that is chosen to give optimal viewing conditions for pictures.



Lightroom: Designed for dual screen use, where user control of the second monitor is directly available in the interface.



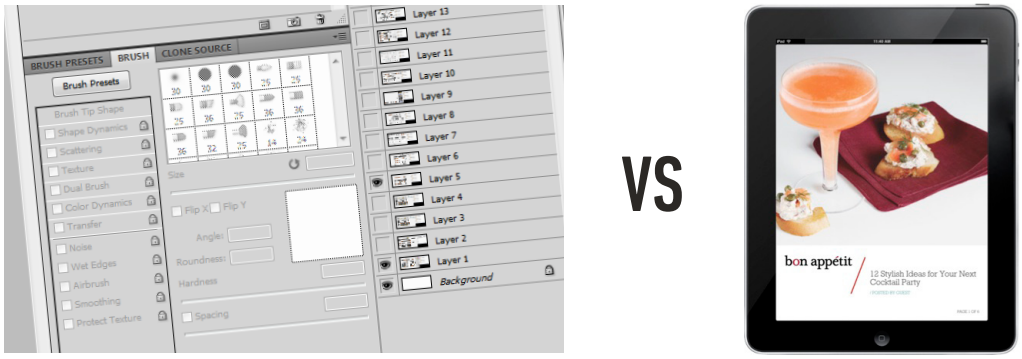
Evernote: Hierarchy of notebooks and notes. Freedom of working without having to save, and access through multiple platforms.



iOS: Delete sequence that demands an extra confirmation from the user without directing them to dialogue boxes

Pokki: Overall responsiveness of the HTML 5 framework. Animated launch and loading sequences reduce the subjective experience of waiting.

ROLE OF THE SOFTWARE
PRODUCTIVITY VS IMMERSION



Defining the program's role in terms of interaction paradigms.

Software today is generally created for one of two purposes, either for productivity or for immersion, and these two archetypes often represent very different interaction paradigms.

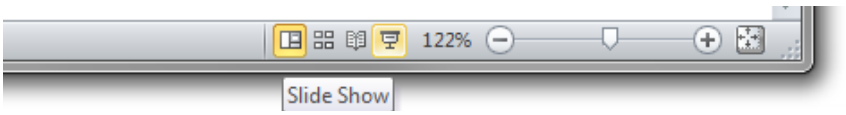
Typical productivity tools such as mail clients, office suites or photo editing software are often focused on the creation of content. They are feature rich with high degrees of customization, and reward the user from extended use and familiarization.

Immersive applications on the other hand, are created with the primary purpose of content consumption and enterainment. These allow a much tighter focus and tailoring of the end user experience. Many mobile apps, media players and games follow this line of thought.

Presentation software has elements of both these archetypes. The same programs are regularly used for both the creation and the display of presentations, with the risk being that they end up doing neither very well.

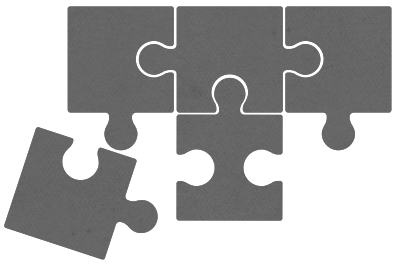
Programs like Powerpoint generally reflect the mentality that presentations should be treated as any other type of document with the same demands for productivity. Consequently, the output capacities of these programs are often lacking.

Slidedog's primary purpose on the other hand is file playback. This allows the user experience to be much more defined by immersion than productivity, and it can help distinguish the program from the competition.



Not the most logical entry point into an immersive full-screen experience

PRESENTATION TOOLS
DESIGN OPPORTUNITIES

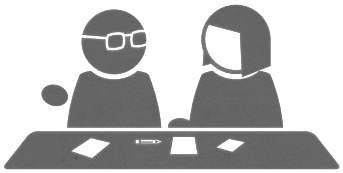


What if presentations reflected your train of thought so that words and visuals are always in sync?

PROGRESSIVE DISCLOSURE

The pace at which information is shared with the audience is largely defined by the media; where the denominator is usually the slide or the bullet point. This is not necessarily the pace that the information is best digested, or synchronized with the delivery of the presenter.

Analogue media such as overhead foils or whiteboards have this sort of synchronization as a latent characteristic. They force the presenter to reason through the arguments while they are written down progressively, and naturally sets the pace of delivery. These constraints can be limiting in some cases, but very helpful in others. It ensures that information is not "frontloaded" on the audience at a rate where it is simply tuned out, and can make arguments easier to follow in settings such as lectures.



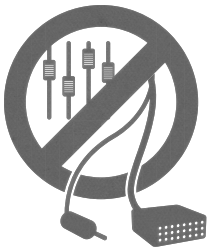
What if presentation tools engaged everyone and allowed you to create things collaboratively?

TWO-WAY INTERACTION

Presentation media, with Powerpoint as the prime example, are very one-directional. Given how presentations are precomposed, there is little room for the speaker to adapt to the audience on the fly, or to improvise. Both the contents and their order are generally determined beforehand, so much of the delivery of a presentation is locked in before walking on stage. If this turns out to be off the mark, the presenter's main option is to skip ahead, which can be anti-climatic to the audience who get to see glimpses of slides or files that are never conveyed to them.

The audience is in turn passivized, as there are no means for them to influence what is shown on screen.

SIMPLER HARDWARE

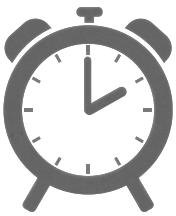


What if there were no cables, no switches and no settings and you could trust things to display the way you want them to?

One very obvious step to improving presentation experiences is to streamline the accompanying hardware interactions. This can often be a major frustration that affects everyone present, resulting in stressed presenters, disinterested audiences and delayed presentations.

These are elements outside the influence of a small software developer such as Preseria, but there are likely technological developments that can be anticipated. New connectivity measures such as wireless screen sharing, near field communications between devices in close proximity, telepresence and remote viewing, or high bandwidth cloud storage are all advances that can potentially make the logistics and administrative sides of presentations much more painless. Most of these technologies are already commercially ready, but still lack wide application in presentation tools.

TIME-KEEPING

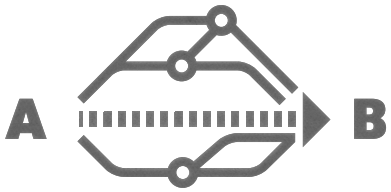


What if there was a tool to help you set the right pace, keep track of your thoughts and warn you when you're falling behind?

One of the obvious issues with presentations is time management. Presenters often exceed their allotted time, and this has a tendency to snowball for events with multiple speakers. These delays are rarely intentional or even conscious by the presenter,

Time management could be greatly improved by giving both presenters and organizers better tools. For presenters, this might be achieved both by having easier ways to estimate and anticipate time usage beforehand, better ways to control the pace during presentations, and a much more visible presence of a timer or clock. For organizers better scheduling, ways to communicate with presenters and give warnings, and quicker transitions between presentations could all contribute towards smoother execution.

PRESENTATION TOOLS
DESIGN OPPORTUNITIES



Instead of moving straight from start to end, what if presentations were laid out like a map where you could take any number of paths between different information nodes?

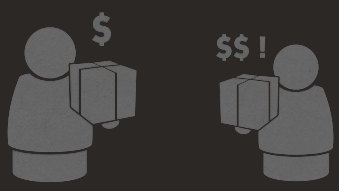
NON-LINEAR

Most presentation media are still strictly linear, such as movies and slideshows. They have a given start- and endpoint and a predefined sequence between these two. This lack of hierarchy can make it hard to convey complex relationships or give an overview of an issue. Some recent tools try to amend this, notably Prezi or other mind-mapping tools that have gained adoption with presenters. Their main benefits are added levels of hierarchy or geometric relations between topics, although these are often illusory.

This linearity affects both audience and presenter, and together with the issues mentioned above they set our expectations for what a presentation should be. The end result is that most presentations take on the characteristics of a story told by a single storyteller. In many cases this might be intentional and effective, but in others it might be detrimental. For instance, in workshops and meetings the goals are collaboration and contribution from all participants rather than having a single narrator.

4

MARKET



The market for presentation software is crowded and quite complex, with a few large established actors and an undergrowth of smaller challengers. Understanding these dynamics and Slidedog's future position in the software ecosystem was necessary to start the design process.

When mapping this ecosystem we looked not only at presentation tools specifically, but also the larger system of auxiliary services that can figure into presentation or event management workflows.

Preseria already has a presence in the professional conference market, but Slidedog's target consumer segment was still uncharted territory.

The goal was to better understand and define Slidedog's niche in order to refine the business model. These decisions would also directly factor into the design process, laying the groundwork for everything from look and feel to the structure for the different versions.

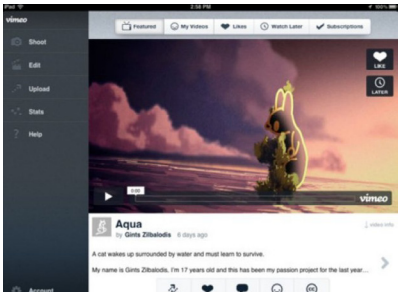
MARKET
NICHES & ACTORS

MAPPING THE ECOSYSTEM

The ecosystem of programs and services catering to presenters has grown considerably over the past couple of years, particularly online and mobile tools. Many are designed for presentations primarily, while others fill indirect support niches, ranging from project management tools to work suites and multimedia tools for advanced content creation, to publishing platforms. Although many of these peripheral products will not directly impact Slidedog, they can serve as inspiration.

The ecosystem has been attempted sorted into niches with some of the most popular or relevant products for each. Many of the products cover more than one of these niches, but they are sorted by the functionality that most strongly defines them.

Typical interface



Niche

CONTENT PLATFORMS

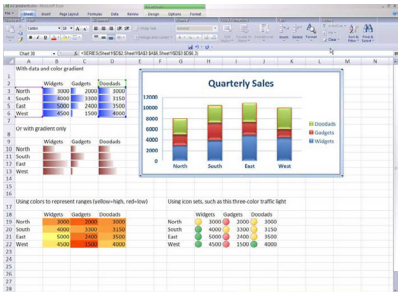
Media specific online platforms

Role

A lot of media content is moving towards large online platforms, which can be accessed from anywhere as well as shared and embedded. Some of these are commonly used in presentation settings, particularly videos from Youtube and Vimeo.

Main actors

Flickr
Youtube
Vimeo
Spotify
Grooveshark
Google Docs

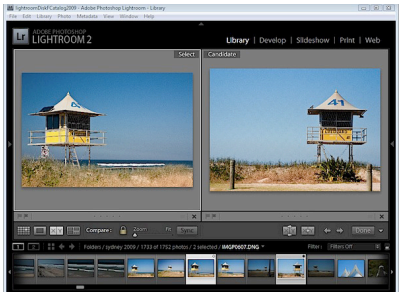


WORKHORSES

General purpose content creation tools.

General purpose work suites are ubiquitous, particularly Microsoft Office. Much of the "raw materials" used for presentations are generated with these tools, such as Word and Excel. However they are in themselves ill suited for presenting the content. Interconnectivity between various programs of a suite is expected.

Office Suite
Adobe Creative Suite
OpenOffice
Google Docs

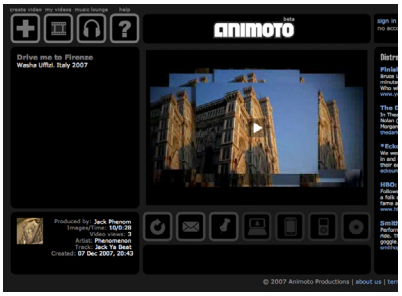


FILE LIBRARIES

Managing media files in large volume

Not commonly tools for presentations, as the frequency and quantity are too low in most personal cases. PowerPoint can serve as a slide library in some cases, although far from ideal for more complex presentations. The strength of these programs lies in quickly accessing large amounts of content through sorting, filtering, tagging etc. They also provide flexibility in playback through playlists and collections.

Lightroom
Papers
Picasa
Itunes
Evernote



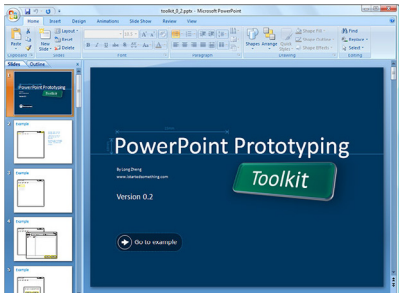
MULTIMEDIA TOOLS

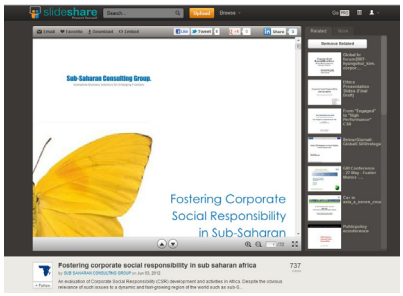
Creating rich multimedia content

Rarely used to create presentations in their entirety, often for multimedia content in professional presentations. Most are highly specialized, but output to common formats such as videos, PDFs or Flash. Are rarely used by the presenter themselves.

InDesign
AniMoto
Final Cut
Flash

MARKET
NICHES & ACTORS





THE POWERPOINTS

Desktop tools for creating slideshows.

Powerpoint is the industry standard, with Keynote having a strong position with Mac users. Less popular within creative industries where InDesign and similar PDF creation tools are preferred due to higher control over layout and appearance. Powerpoint and Keynote have well-featured presenter's tools, but embedding files such as videos often causes problems.

THE SLIDE SHARING PLATFORM

Online publishing solutions for presentations

Most of the online presentation creation tools feature integrated sharing platforms. These are still not commonly used compared to publishing-specific sites such as SlideShare for powerpoints and Scribd for text documents and PDFs. Their main draws are the ability to reach a very wide audience as well as interacting with the audience. Not suited if the presentations are not intended for public viewing.

CANVASSING TOOLS

Presentations with a mind-mapping approach

Gaining in popularity as the output is distinctly different from ordinary slides. Well suited for showing complex relationships and nonlinear presentations. Web-based tools are the norm with Prezi being the most popular. All the tools lack in terms of presenter's aids.

Powerpoint
Keynote
InDesign
Acrobat
OpenOffice Impress
Corel Presentations

SlideShare
Prezi
SlideRocket
Scribd
Speaker Deck
Authorstream
Empressr
Myplick

Prezi
Mindmodo
Omnigraffle
Ahead
Mindmaps

THE BROWSER POWERPOINT

Creating presentations online

Gaining in popularity but still far less common than desktop applications. Still lack the feature set of their desktop counterparts, but are often communicated as easy to use. Main selling points are the ease of sharing and integration with social media and in some cases collaborative creation. Dependance on network connectivity is still seen as a drawback.

MOBILE PRESENTATIONS

Portable presenter's tools

Presentation tools are increasingly gaining support for mobile platforms. There are several third-party apps that enable presentations for tablets, as well as native support in keynote. These are mainly intended for showing slides in smaller meeting environments, and can be used as remote controls for projectors.

ORGANIZER'S TOOLS

Managing events and meetings

Commonly used in office environments for project management, organizing and collaborating. Most are not specifically intended for events and presentations, but can be used in their preparation. Nearly all are web and cloud-based. Event-specific tools focus on registration and ticketing, with Eventbrite and Amiando being the most popular.

SlideRocket
Google Presentations
280Slides
PreZentit
Empressr
VCasmo

Keynote app
Powerpoint App
SlideShark
Presentation Link

Eventbrite
Amiando
Basecamp
Zoho
Dropbox
Outlook
Google Calendar
Meetup
Gmail

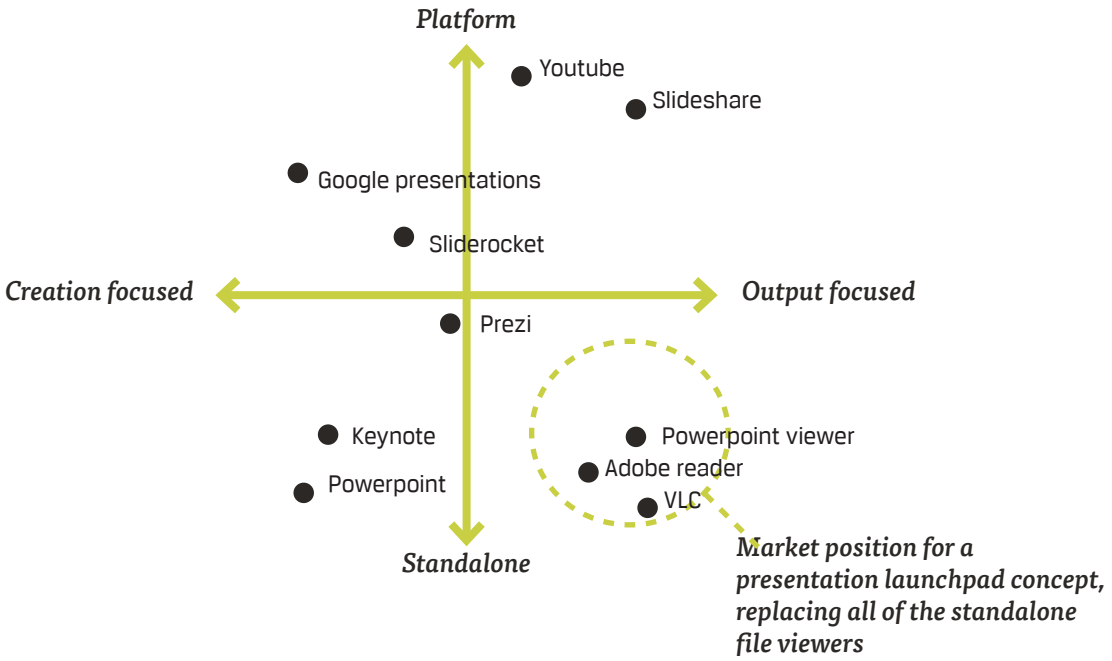
COMPETITORS
FUNCTIONAL ANALYSIS

	POWERPOINT	KEYNOTE	PREZI	SLIDEROCKET	SLIDESHARE
Creating text slides	✓	✓	–	–	✗
Storyboarding	✓	✓	✓	✓	✗
Basic data presentation (charts & tables)	✓	✓	÷	–	✗
Conceptual slides & nonlinear presentations	÷	÷	✓	÷	✗
Graphics creation	–	–	÷	–	✗
Multimedia playback (video, audio, animations)	–	–	÷	✓	✗
Animation/movie making	✓	✓	–	–	✗
Presenting live	✓	✓	÷	÷	✗
Audience interactivity (polls, comments, statistics)	÷	÷	✓	✓	✓
Handling large number of slides/ multiple presentations	–	–	÷	✓	–
Collaborative editing	✗	✗	–	✓	✗
Publishing online and sharing	÷	÷	✓	✓	✓
Mobile presentations	–	✓	÷	✓	✗
Scheduling and organizing	÷	÷	✗	✗	✗

GOOGLE PRES.	INDESIGN	EVENTBRITE	LIGHTROOM	ANIMOTO	TOOL OF CHOICE
–	✓	✗	÷	✗	InDesign
–	✓	✗	–	✓	Animoto
–	–	✗	✗	✗	Powerpoint with Excel
÷	–	✗	–	÷	Ahead, Omnigraffle
–	✓	✗	–	÷	Adobe Creative Suite
÷	÷	✗	–	✓	Powerpoint
÷	÷	✗	÷	✓	Final Cut Pro, After Effects
–	✗	✗	÷	÷	Keynote
–	✗	✗	✗	÷	SlideRocket
–	–	✗	✓	✗	Lightroom
✓	✗	✗	✗	✗	Google Presentations
–	✗	✗	–	✓	SlideShare
✗	✗	✗	✗	÷	Keynote
÷	÷	✓	✓	✗	Eventbrite, BaseCamp

✓ Good
– OK
÷ Poor
✗ Not Supported

MARKET
POSITIONING



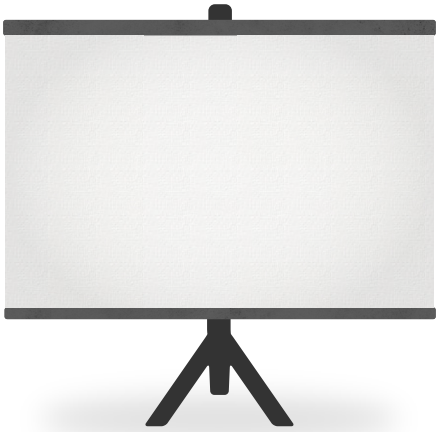
The goal is not to replace the products people use to create their presentations, or to compete directly with these. Instead, Slidedog aims to add value for the users of these products by providing a presentation launchpad; a service specifically tailored for showing presentation files.

As shown in the market analysis, there is already a wealth of presentation tools available to choose from, both new platform tools like Sliderocket and Prezi, and established programs like Powerpoint which are de facto standards for presentations. Competing directly with these programs would be a very steep uphill battle, both in terms of the resources invested in development, and overcoming existing user loyalty.

Instead, the desired position for Slidedog is to be the tool of choice during live presentations. Today, there are number of programs for showing presentation files, but each of these usually supports just a single format. This adds a lot of needless complexity when presenting multiple files. In addition, many of these programs are purely media players that offer no benefit to the presenter besides being able to show the file.

A crucial part of positioning SlideDog is to communicate this role clearly to the users, or it can quickly be seen as just another Powerpoint clone. Slidedog gives users the freedom to stick with their tools of choice for creating presentations, but it aims to provide the best solution for showing these files to an audience.

SERVICE CONCEPT
THE PRESENTATION LAUNCHPAD



1 *Presentation files are collected in a single interface.* → 2 *Slidedog interacts with other software to play these files* → 3 *Presentations are displayed seamlessly*

Slide Dog works as a launch pad for presentations. It's built around using the best available file viewers for different presentation media to play back files. SlideDog detects what programs are installed on the machine and chooses the appropriate/best one to play back the media. This happens behind the scenes, so the audience will never see the file switches or players, just the content itself.

This launch pad approach means that SlideDog is dependent on other software and is not fully functional as a standalone application.
The downside to this is that the installation process can become cumbersome if a lot of the file viewers are missing from the system, and especially on hardware that is not one's own. The approach also places some restrictions on development, because a lot of the program's behavior is already defined by these file viewers.

The upside is that relying on the third-party viewers ensures that every file can be displayed natively, the way it's intended. These different file formats are created and supported by sizeable development teams, and SlideDog is able to rely on each of these teams' expertise. Developing these players from scratch would not only require a large budget and significantly limit the number of different file formats supported, it would also mean that SlideDog would have to play catch-up every time a new version of one of these file types was released.

This is the underlying motivation for the creation of SlideDog. It allows the presenter or organizer to interact with a single interface to show all types of presentation media, rather than a different one for each proprietary format. A user should be able to drag any type of file into SlideDog and be confident that it's displayed the way he or she intended. This also streamlines the experience for the audience because SlideDog handles all the switching behind the scenes ensuring that things run seamlessly without interruptions.

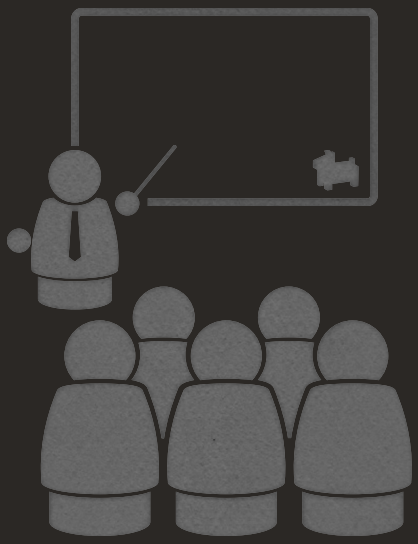
BUSINESS MODEL
FREEMIUM

One of the hypotheses for the new product was to introduce it as a freemium offering. This means making the core product available to users free of charge, while charging for various "pro" or "premium" features. In order for this business model to succeed, the product has to provide value to a wide range of users, and for the free version to essentially market itself.

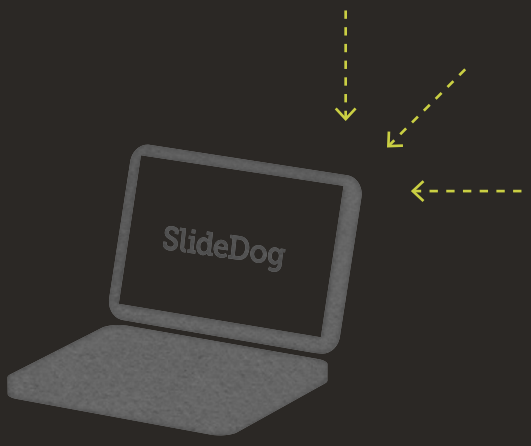
The two critical metrics for a freemium product are the rate of adoption and the rate of conversion. The first metric measures how many new users the service gains, while the second is a measure of what percentage of these free users convert to become paying customers. This effectively requires the free offering to be useful enough and visible enough to attract a large user base, while the features reserved for the premium version have to be compelling enough to convert a significant portion of the user base.

User adoption is naturally the first requirement that has to be established, even before a premium offering is introduced, and this was one of the goals of the beta product. User adoption is both a validation of the value offering and a channel for user feedback. The user base, community and user loyalty is also of value to potential investors and partners, even if no direct income is generated.

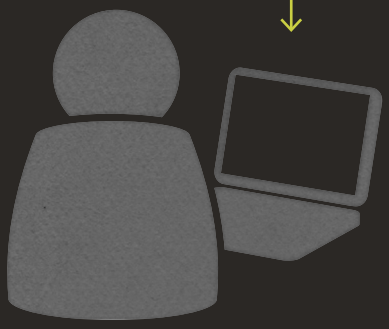
The high visibility use context of the software can be advantageous in terms of gaining recognition, especially when the presentations are given in front of large audiences. By giving the output of the product some distinctive features, audience awareness is created around the offering. Even though Slidedog shows presentation files in an unbiased manner, there are several ways to create this distinctiveness, for instance through file transitions, background images for the presentation, or some kind of watermarking.



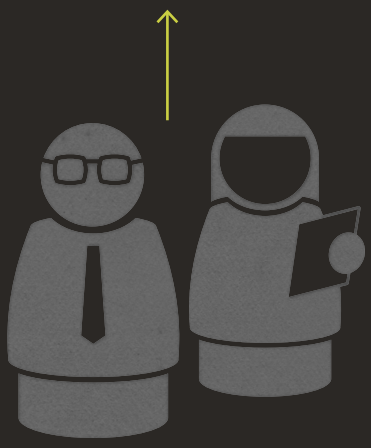
1 *Exposure to Slidedog*



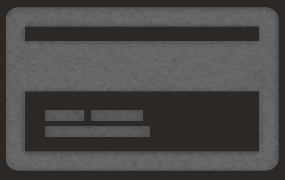
2 *Discovery online*



3 *Becoming a free user*



5 *Becoming an evangelist*



4 *Ownership*

5

USER MAPPING

Having an idea of the market position to fill, the next step was to gain an understanding of the potential users of the product.

This was approached by exploring user archetypes; people in various roles or professions whose presentation needs might potentially be served by Slidedog. Out of these identified archetypes, user personas were crafted that could bring these users to life and embody some of the stereotypical traits of the different roles.

The personas were an internal tool for discovering needs and building empathy later in the ideation process, but they were also a tool for dissemination. Through the work with conference, Preseria already had a lot of knowledge about their user base, and in some cases these overlapped with the potential Slidedog users.

Working off the personas was a way to share this knowledge amongst the team and possibly narrow the scope of target users. We went through each of the identified personas, assessing their needs and the relevance to Slidedog, and in the process identified several new user groups.

ARCHETYPES
POTENTIAL USERS

EARLY ADOPTER

CHARACTERISTICS
Wants to be first in the know, and actively searches out what's happening online. Tries out everything that mentions the words "social", "cloud" or "sharing". Has at least three apps for every problem, and frequently switches if something newer comes along. Highly active on social networks and prefers online access everywhere.

APPROACH
Likely to test out new betas and could potentially become an active and vocal community member providing feedback. Less likely to become a longtime user if the service does not meet his actual needs. Likes to receive some sort of recognition for his efforts such as community status or early access. Loves to see developers actively responding to audience, and will often share his experiences with a large number of people. Much more likely to try if the service is free.

RESEARCHER

CHARACTERISTICS
Focus on publishing findings, either as articles/papers in journals, or at conferences. Communication is mainly aimed at peers in the scientific community. The content is in focus and should be shown unbiased and detailed, while spending time on how things looks is "unserious". Meticulous and reflective, but not always equally pragmatic.

APPROACH
Attracted by native and unbiased display of data. Very up to date on his or her specific field, but less so on general tech trends. Will attend a large number of presentations through different conferences, and is likely to be influenced by peers. Cares little about visual customization but may be attracted by cataloguing and indexing capabilities. Most likely to read the spec sheet.

EXECUTIVE

CHARACTERISTICS
Spends a lot of time in meetings or talking with people. High self-confidence, and values efficiency and to the point communication, preferably bullet points. Multi-tasker and chronically under time constraints, but prides himself on being able to keep cool and deliver under pressure. Often delegates tasks, and presents the work of others; likes numbers and measurable results. Does not "have time" to learn new software and expects it to "just work". Does not tolerate failures or delays.

APPROACH
Most likely to be swayed by features that can show measurable gains, such as time savings or increased profitability. Must be quick to learn, secure and reliable above all else. May not have time to seek out new solutions and rather stick with what's familiar. Other parts of the organisation such as IT or sales may be gatekeepers in terms of software choices. Cost has very low relevance if measurable gains can be shown.

TEACHER

CHARACTERISTICS

Wants to convey knowledge even though students rarely seem to share the same passion. Feels his subjects are constantly undervalued by the administration. Strives to create interest through active dialogue with students during the lectures; wants to inspire curiosity and independent inquiry and keep the discussion away from grades and exam questions. Uses slides for most lectures but often feels the whiteboard is just as effective. Shares all the course materials with students. Uses mostly the same lectures from year to year, but takes the time to update some of the topics.

APPROACH

Has varying degrees of interest for technology, and may feel pushed by students to stay up to date. Reuses content extensively, and may often rely on large amounts on text and bullet points. Might be intrigued by solutions that are less static than slides, such as annotations or slides. Appreciates the ability to easily share content with large amounts of people. Will be dictated to a high degree by the software choices of the school/organisation.

CREATIVE PROFESSIONAL

CHARACTERISTICS

Likes to be in control of every part of the presentation. Borderline obsessive affection and hatred for little details. "Things and software have personalities too". Likes bold gestures, humour and conceptual thinking. Very particular on how things communicate visually and wants full control of things like typography and colors, but in a WYSIWYG setting. Would marry Adobe or Apple.

APPROACH

Will often have a variety of different media and formats to show, and attracted by playback capabilities. Wants presentations to be seamless and hates the noise created by unwanted elements. Likely to have deeply established workflow and software preferences when it comes to creating content, and values integration with these.

SPEAKER

CHARACTERISTICS

Outgoing and strong personality. Very aware of how things he says and does are perceived. Often relates things to personal experiences or anecdotes and collects stories. Loves the spotlight and likes to have focus on personal rather than slides when presenting things. Uses body language and voice consciously to captivate the audience and get a message across. Spends a lot of time travelling and often presents the same talk or material several times. Has everything rehearsed down to the slide.

APPROACH

Has routines for presenting and creating the presentations as well as a large library of content to use or reuse. Switching costs will likely be perceived as very high current if the current workflows and routines are satisfactory. Will rarely create presentations from scratch, and may have interest in showing video and online content. Most attracted by the possibility of getting technology out of the way and creating more seamless presentations.

ARCHETYPES
POTENTIAL USERS

SECRETARY

CHARACTERISTICS
Responsible for preparing and organizing, but not the execution. Will have to gather and compile content from various sources and set the stage. Probably does not want to or feel competent to play the role of technician, but nevertheless carries some of these tasks for smaller events. Acts on directives, wants reassurance that things are working as intended.

APPROACH
Not likely to be the decision-maker in terms of technology and software used. Events and presentations likely to be just one of several responsibilities and not the main focus. Likely to appreciate a "one size fits all" approach that supports all formats without conversion or hassles. Anything that eases logistics will be seen as a great benefit. Software must be easy to use out of the box and preferably not allow for too much customization.

PR MANAGER

CHARACTERISTICS
Responsible for the public communications of larger businesses or organizations. Will have to deal with both planned events and more improvised presentations, such as inquiries from the press. Very experienced in speaking to audiences and conveying the intended message. Particular in the choice of words and expert at dealing with sensitive subjects. May often act as a "face to the world", getting the decisions and content from other parties, but having responsibility of presenting them.

APPROACH
High visibility and often high stakes presentations. Will demand reliability and security above all else. Everything communicated must be professional. Will likely appreciate "transparent" interfaces, where content is not affected by anything outside of their control. Less interest in sharing and tech specs. May hold a high degree of sway in organizations, but likely not the final decision-maker.

JOHN DAWSON
MOTIVATIONAL SPEAKER

Age: 45
Social status: Divorced with a 7 year old daughter
Profession: Tours internationally giving motivational talks to businesses and at conferences. Has authored a fairly successful book about "personal empowerment"
Favorite websites: Ted.com, twitter, New York Times
Favorite places: The stage, taking his daughter to the movies

After going through a divorce and a midlife crisis, John quit his job and wrote a book about getting his life back on track. It became a best-seller, and after receiving a lot of requests to come and tell his story, John gradually became a full-time speaker.

The last five years he's spent around 150 days a year travelling, giving around 100 talks annually. He both performs for large businesses, at conferences and private venues, and treats each audience more or less the same. The most important thing for John is that his stories have an impact on people and inspire them.

John is very conscious about how he communicates, both verbally, with body language and slides. He wants to be in control of every aspect of his presentations and spends a lot of time rehearsing to get it just right. He also tries to make his stories very personal and based on his life experiences because he feels this is the best way to connect with the audience.

John has become used to living a lot on the road, and has to make his entire life fit in a suitcase. He has a perpetually bad conscience because about not spending enough time with his daughter but tries to skype with her every night.

> *“ I hope everyone in the audience can at least take something home from one of my talks! ”*


4:59
Monday, April 5
slide to unlock
FILTER CIGARETTES
Marlboro
MINISTERSTVO ZDRAVOTNICTVÍ VARUJE:
ROZUM A CHTÍČ NEMOHOU BÝT V OPOZICI NATRVALO
KLM
I'M NOT A MOLESKINE OBSESSIVE LIKE SOME PEOPLE ARE...
...THIS IS THE PERFECT NOTEBOOK FOR YOU.
...BUT IF YOU DO A LOT OF POWERPOINT (LIKE I DO)...
DON'T YOU THINK ?
CFI
CALIFORNIA FILM INSTITUTE
MILL VALLEY FILM FESTIVAL
ZIRH
SHAVE GEL
BIOTHERM HOMME
SENSITIVE SKIN SHAVING FOAM
HONDA

VIBEKE RIEBER-MOE
CEO, SERIAL ENTREPENEUR

Age: 51
Social status: Married with three children.
Profession: Runs a chain of spas and salons that she started from scratch, is a board member or chair for seven larger Norwegian companies
Favorite websites: Twitter, Dagens Næringsliv, Huffington Post
Favorite places: The family cabin in Trysil, Prague, her spas

After getting her MBA, Vibeke has founded and run several successful companies, most recently her chain of spas which is the most rapidly growing in Norway. She has had a number of different roles in Norwegian commerce, both advisory and as an investor. She's quite used to the spotlight being married to a politician, but loves to sometimes get away from everything by either going skiing or hiking.

Vibeke's weeks are usually quite packed and disjointed from having to attend to her own company and her boardroom roles, but she's a self-proclaimed multitasker and ADD'er. She quite often gets request to give talks at different events and from startup prospects, but she usually has to decline.

She's quite an avid tech user, especially with her iPad and iPhone which allows her to stay in touch and get work done while travelling. She also loves to read up on a bit of gossip in-between.

> *"I have to structure my day or I'll get drowned by the work."*


bonaqua
UTEN KULLSYRE
SKOGSBÆR
iPhone
tic tac
WINTERGREEN

EMIL INGEMARSSON
STUDENT, BLOGGER

Age: 28
Social status: Single
Profession: Student of media and communication, freelance online journalist
Favorite websites: Own blog, Twitter, Reddit, Gizmodo, Engadget, Facebook, Tumblr,Pinterest
Favorite places: The cafés in Stockholm, Apple Store

Emil has a keen interest in everything related to new technology and in particular online social networks. He spends several hours each day checking out various feeds, sites and blogs and feels out of touch if he's not online for more than a couple of hours.

He's fascinated by how technologies and social platforms are changing people's lives and how businesses are adapting. He tries to document his daily life online and loves sharing it with others. He also has some pride in being the first in his circle to find out about a lot of things and sharing it with his followers.

Even though he loves what he's doing and doesn't mind doing it for free, Emil hopes to eventually make a living out of it. He's had a few of his pieces published on large websites, but wants to work more as an advisor or consultant for businesses on their social media strategies.

> *“Technology has allowed us to communicate in totally new ways, but so many people are still stuck in the past...”*

TROND FURUSETH
COLLEGE LECTURER

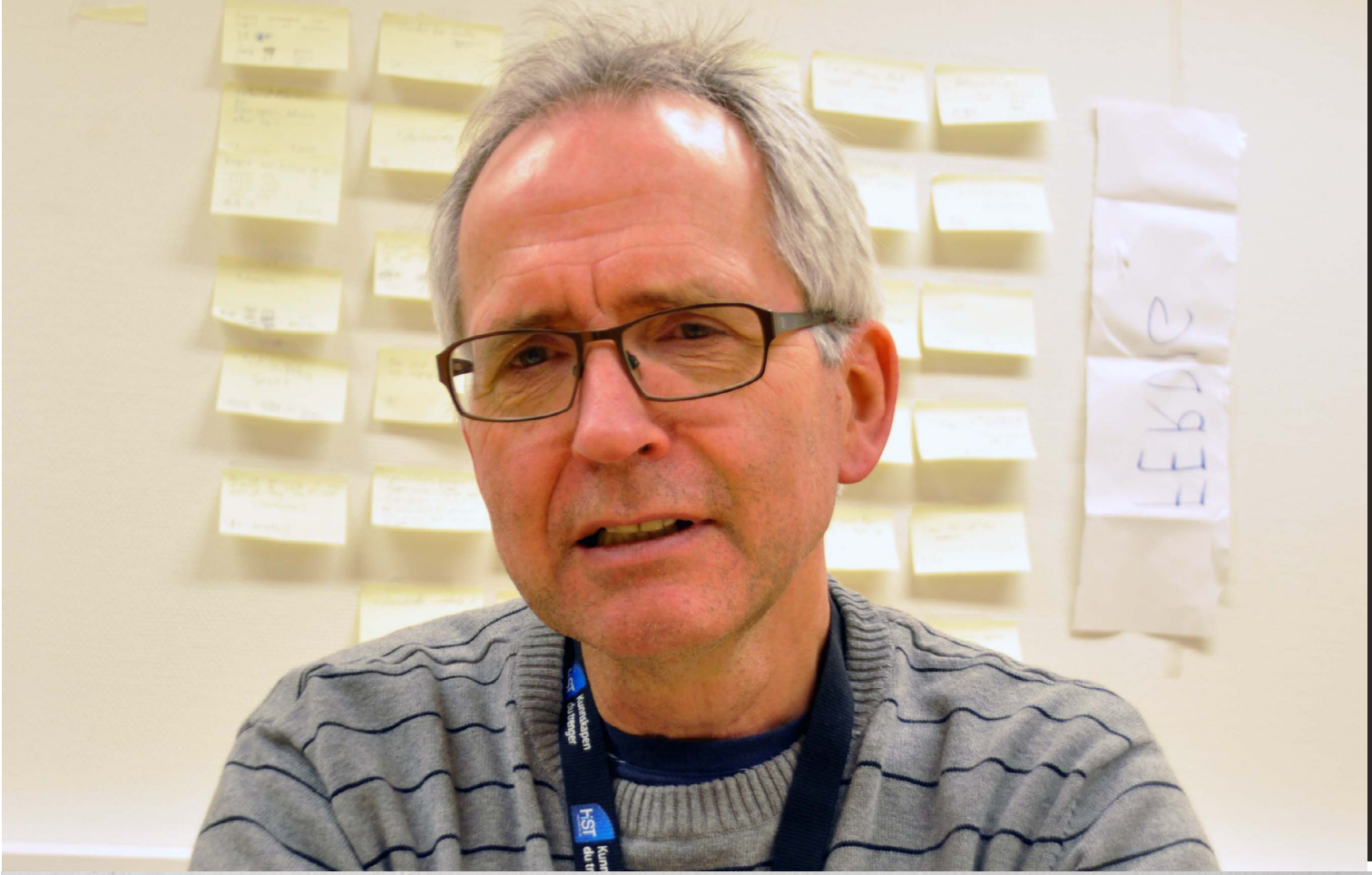
Age: 57
Social status: Married, 3 children and one granddaughter
Profession: Teaches economics at Trondheim økonomiske høgskole
Favorite websites: Aftenposten.no. yr.no
Favorite places: At home on the sofa, sailing

Trond has worked as a professor of economics for nearly 25 years, after a short career running his own business. Enjoys lecturing and tries to create an active dialogue with his students by giving tasks and open lectures.

His lectures focus more on giving an understanding of economic models than on the facts and numbers behind. Because he works a lot with numbers and graphs, he often prefers to use the chalkboard. He feels this creates a more dynamic learning environment with better pacing and room to learn. He also tries to make his lectures relevant and relatable to the students by using a lot of real-world cases and examples from the news.

Trond is a bit sceptical of modern technology and doesn't like updating to the newest and fanciest gadgets so long as what he has still works. He's also not a fan of the online platform that all the college courses use because he feels it creates technical hurdles that steal his time away from teaching.

> *“There’s too much focus on just facts and numbers. I want to create an understanding of the models and principles!”*




EUROCARD

PETRA BIDJAN
PHD RESEARCHER

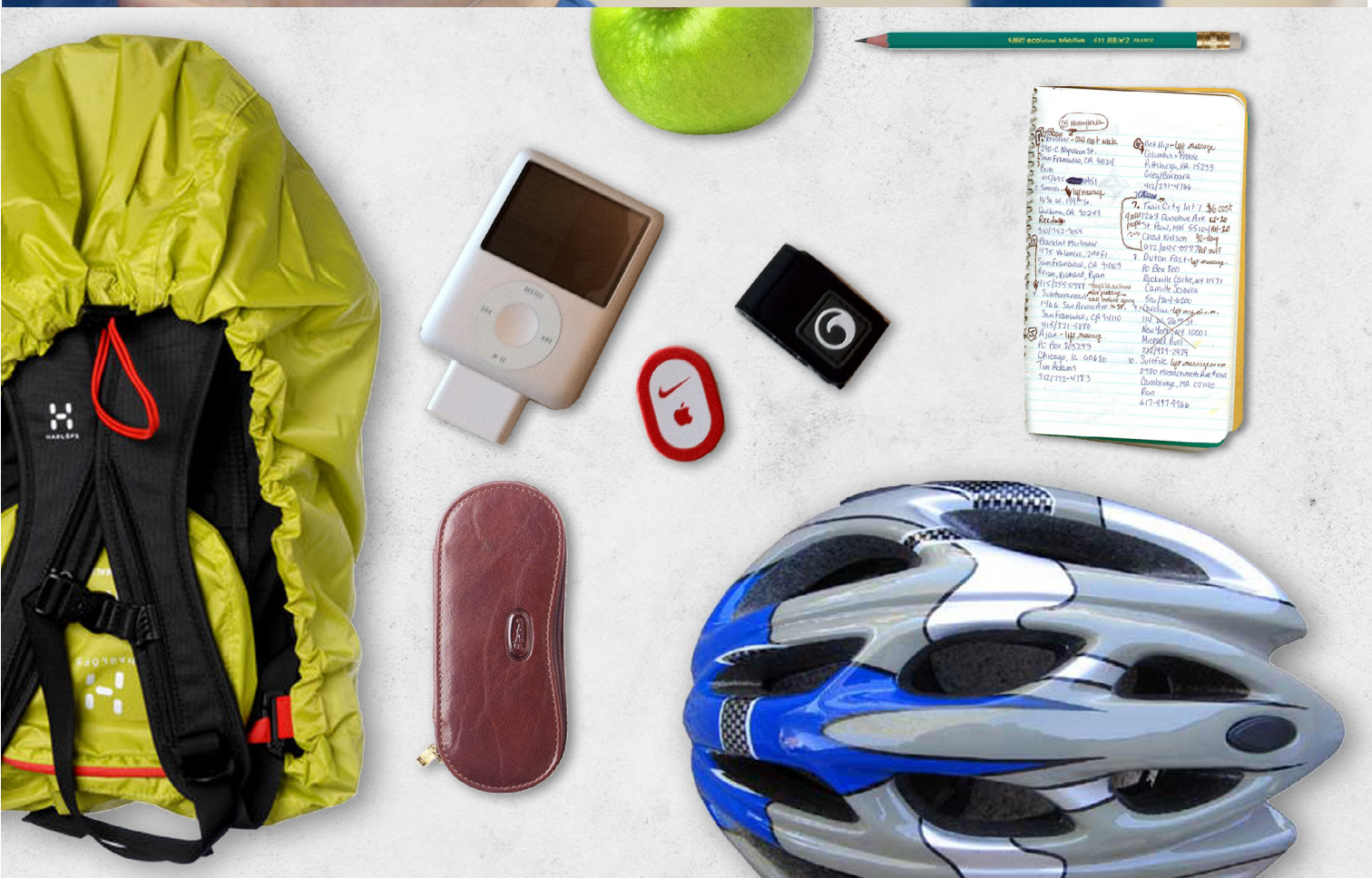
Age: 29
Social status: Engaged
Profession: Molecular biology PHD Student
Favorite websites: Facebook, radiolab, Ted.com
Favorite places: Bymarka, the lab

After spending a year as an exchange student in Trondheim, Petra fell in love with the city and returned a year later to start her PHD research. Together with her team and advisors, Petra has reached some surprising insights about the immune system functions of small mammals that have been published in several well renowned medical journals and received a lot of attention.

Petra has recently been invited to present her findings at an international conference and is slightly nervous as she usually avoids the spotlight. Most of her normal work is done in the under the microscope or analysing high-magnification imagery. She's sceptical of conveying the findings outside the lab because a lot of the crucial details can get lost.

Petra loves being outdoors in nature, and bikes to work every day. She prefers a structured and predictable life.

> *"People always ask what I research but they get bored before I can explain it halfway."*



TINA LOCKLEY
FREELANCE WEB DESIGNER

Age: 31
Social status: Lives with boyfriend of 3 years
Profession: Runs a small freelance web design agency together with boyfriend, also does some graphic design and animation work.
Favorite websites: Smashing Magazine, Behance, DeviantArt
Favorite places: Local Starbucks, New York.

Tina works as a freelance designer from her home office in Vancouver, Canada, which she runs together with her boyfriend. Even though the company is moderately successful, it's just barely enough to pay the bills. Still it's a tradeoff they're happy to make for the flexibility and chance to work with what they love.

A true urbanite, Tina loves the vibrance and cultural diversity of her hometown, and she often spends much of the day working from her neighbourhood coffee shop. She has a weak spot for flashy colors and for local goods. Being mostly web-based it's sometimes a challenge to get a good dialogue with clients, but she tries to present her work often and in person whenever possible. She's also active in local designer meet-ups to get inspiration, feedback and stay updated on what's going on.

> *“Even if I never become a millionaire, I still get to do what I love for a living!”*


SUGARFREE
Orbit
Orbit

UNNI MOLAND
OFFICE ADMINISTRATOR

Age: 43
Social status: Married, 2 children
Profession: Office administrator/secretary at a publisher
Favorite websites: VG.no
Favorite places: Going out to eat, summers in Greece

Unni has worked nearly 20 years at a major publishing house, where she's in charge of a lot of the logistics behind the everyday workings of her department. Her coworkers sometimes refer to her as the mother hen because she seemingly knows everything going on at any given time. Her colleagues put a lot of faith in her when they need something done or to keep track of things, and as a result Unni often ends up having to juggle a lot of balls at once.

She's in charge of the weekly breakfast meetings and the social meet-ups on Fridays, as well as a lot of the more irregular things organized in-between everything else. She's not particularly fond of using computers for anything beyond text editing and mail, but she still takes the responsibilities seriously and feels like it's her fault if something goes wrong.

Unni also has her hands full with her family with two young kids and a husband that travels a lot. She still tries to keep some sort of routine and values family time above else. She's both in charge of her son's football team and the parental representative for his class. Lately the combined stress of everything has gotten to her and she's had to take a sick leave.

> *“I’m just relieved every time it works like it’s supposed to.”*


Kleenex
balsam
Paracet
Paracetamol 500 mg
Smertestillende, febernedsettende
20 tabletter
Post-it
Notes
3M
JANUARY/FEBRUARY
2011

CARL OVE WARLOE
COMMUNICATIONS DIRECTOR

Age: 43
Social status: Married
Profession: Communications director for NSB
Favorite websites: Twitter, Gmail, DN.no
Favorite places: Skiing in Hemsedal, biking

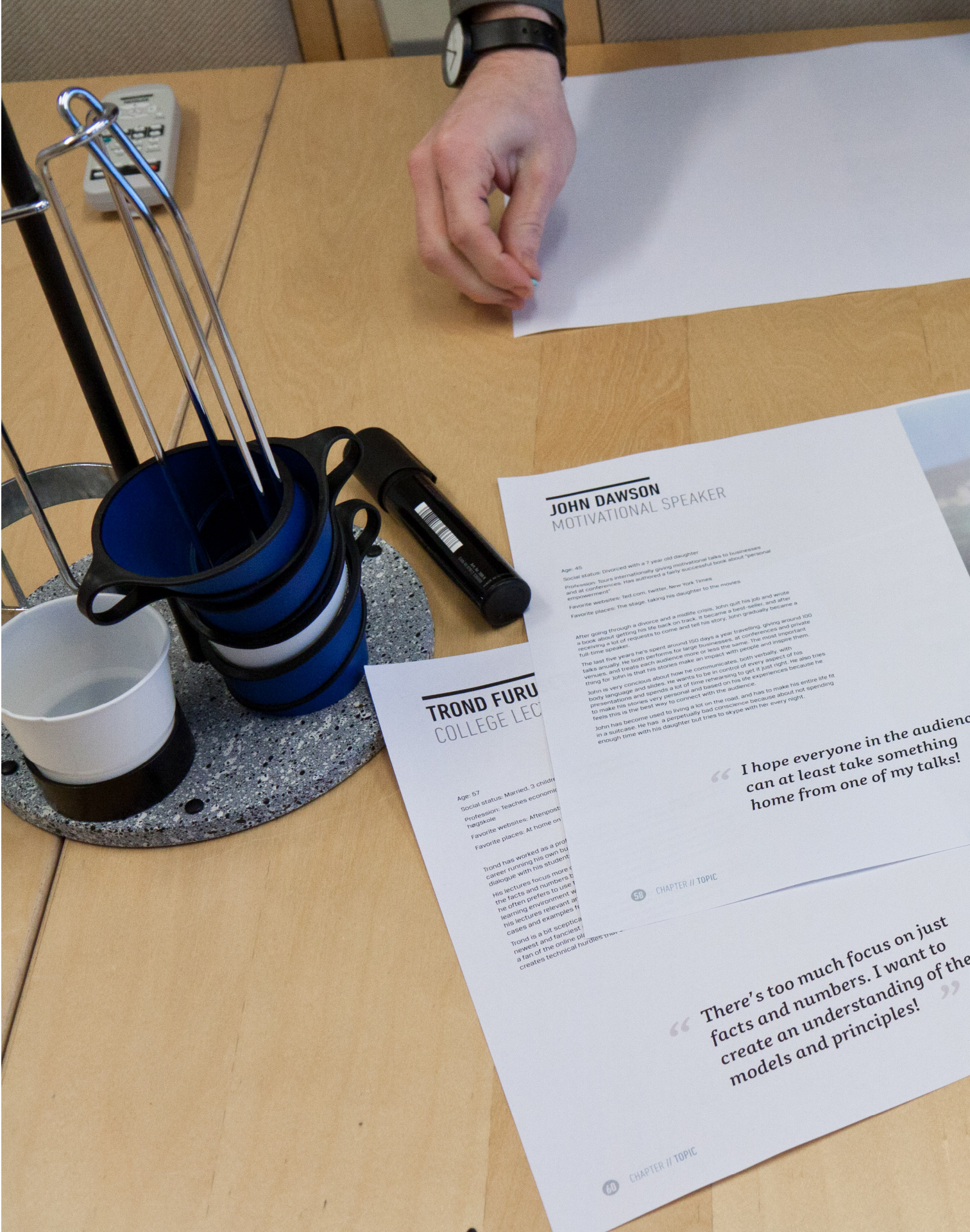
As communications director for a major railroad company, Carl Ove is both used to the spotlight and a familiar face in the media. After struggling with a lot of negative publicity, NSB decided to change their PR strategy and headhunted Carl Ove.

He has put his effort in creating a more positive and coherent message for the company, but faces a lot of resistance both internally from a large and slow organization, and from a general negative public perception. His main struggle is that there have been a lot of disjointed and sometimes contradictory communication from the company, which combined with technical problems have created a sense of chaos.

Changing image demands that communication stays on target and is professionally delivered even when there is no time to prepare and just a few minutes of exposure.

> *“When the phone rings I have to be ready with our side of the story on the spot.”*


ThinkPad
SAMSUNG



JOHN DAWSON
MOTIVATIONAL SPEAKER

Age: 45
Social status: Divorced with a 7 year old daughter
Profession: Tours internationally giving motivational talks to businesses and at conferences. Has authored a fairly successful book about "personal empowerment"
Favorite websites: Ted.com, Twitter, New York Times
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After going through a divorce and a midlife crisis, John quit his job and wrote a book about getting his life back on track. It became a best-seller, and after receiving a lot of requests to come and tell his story, John gradually became a full-time speaker.

The last five years he's spent around 160 days a year travelling, giving around 100 talks anually. He both performs for large businesses, at conferences and private venues, and treats each audience more or less the same. The most important thing for John is that his stories make an impact with people and inspire them.

John is very concious about how he communicates, both verbally, with body language and slides. He wants to be in control of every aspect of his presentations and spends a lot of time rehearsing to get it just right. He also tries to make his stories very personal and based on his life experiences because he feels this is the best way to connect with the audience.

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"I hope everyone in the audienc can at least take something home from one of my talks!

58 CHAPTER // TOPIC

TROND FURU
COLLEGE LEC

Age: 57
Social status: Married, 3 childr
Profession: Teaches economic
høgskole
Favorite websites: Aftenpost
Favorite places: At home on

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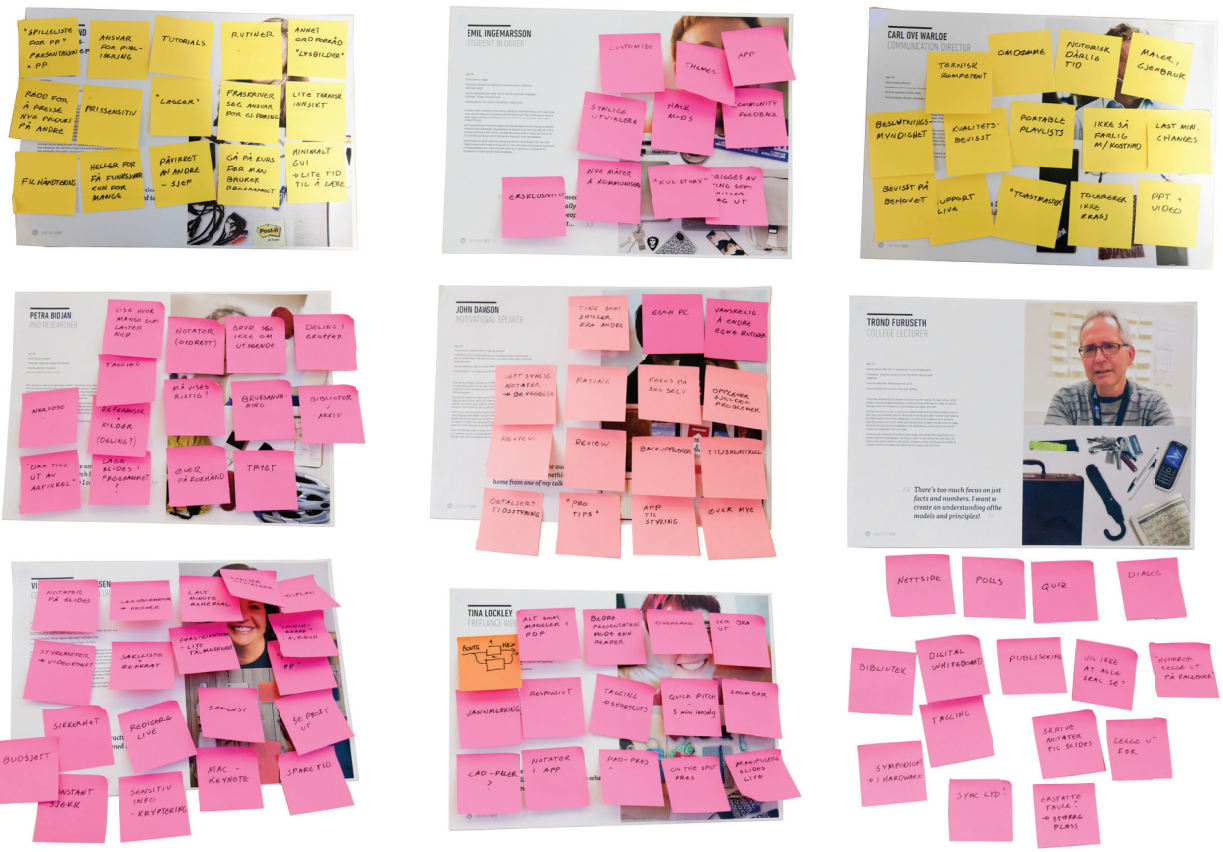
creates technical hurdles tha

"There's too much focus on just facts and numbers. I want to create an understanding of the models and principles!"

60 CHAPTER // TOPIC


ThinkPad
Marlboro
BLICK STUDIO

WORKSHOP
IDENTIFYING USER NEEDS



Brainstorming around each of the identified archetypes to uncover needs and potential offerings for each of the groups

The personas represented the potential target users that had been identified, but they were largely based on my own assumptions and a limited insight into the use context.

We conducted a workshop as a team, working through the different users systematically, creating scenarios for how each of these might use presentation software and trying to uncover their individual needs. The process also uncovered two new user archetypes; the PR manager and office administrator/secretary, which were subsequently explored.

The workshop provided an opportunity to share knowledge of the different use, and work towards a common understanding of the direction for the project.

Although there wasn't any one particular user group that stood out as the top priority, we discovered that many of the users seemingly shared the same needs.

These were summarized as a set of core requirements for that the product offering should aim to fulfill.

REQUIREMENTS

CORE NEEDS

SECURITY

Using SlideDog has to create a sense of user confidence that it is reliable and will not break down in the middle of a presentation. Users demand the "it just works" sense of security, to be able to do away with all the technical hassles, but so far none of the alternatives offer this. Even better, the software has the potential to increase the users' own confidence and sense of security when presenting.

EASE

Adopting SlideDog means adding a new piece of software into the presentation workflow. This extra step must contribute to solving some tangible goal, because it complicates the process just by virtue of being. It has to be quick to learn, and presenting in SlideDog has to be easy to the point where people who have never seen the program can pick up the clicker and go. People have limited patience and motivation to learn new tools, especially if the gains aren't immediately obvious.

FLEXIBILITY

SlideDog has to support all of the common file formats used for presentations. This allows users to create presentations to their preference, then bring it into SlideDog assured that everything works. As an organizer's tool, this is also a necessity, so that there aren't exceptions or workarounds every time a presenter has a special request. SlideDog can become a shoehorn or a door opener depending on it's flexibility.

PORTABILITY

Presentations rarely start and end their lives on the same computer. The presentations created with SlideDog have to be easily portable between different machines and even different platforms. Otherwise it risks being tested out in the comforts of the home and later discarded when it comes to the real stage. Eventually it could become something like the dropbox of presentations, where files are constantly available anywhere without the user having to think consciously about it.

6

SLIDEDOG IDENTITY

Establishing the Slidedog identity was in many ways the kickoff for the project. The work up until this point had been mainly building an understandingof users and context as well as some early ideation. Up until this point, the Preseria Presenter beta was being developed in parallel, but largely separately from the thesis work.

The public beta launch, the first major milestone, was roughly a month away, and before this a number of things had to be in place. The service needed an identity and a website in order to reach the public, and there was considerable work to be done on the application itself.

This phase was in many ways decisive for the future collaboration in the project. The identity work and web design were not a part of the original plans for the thesis, and it felt a bit premature to jump into it.

The alternative however, was that a lot of the project's foundations were laid and decisions were made without being able to influence them. This could potentially lead to the two projects staying on separate paths much longer, and certainly delaying close collaborative efforts.

IDENTITY

NAMING THE SERVICE

At the start of the project, the application was called Preseria Presenter, implying a more output-focused counterpart to the already existing Preseria Conference.

Shortly before starting on the identity work, it was decided to change this to Slidedog. The main motivations for the name change were increased recognition and memorability, as opposed to the rather anonymous Presenter. In the field of often similar sounding and looking presentation tools, it is better to be Seth Godin's proverbial purple cow than get lost in the masses.

The name had to both describe the service offering and have some memorable characteristic, as well as have an available .com-domain. This recognition is a key to success for the intended freemium business model that relies on viral adoption to gain a broad user base.

IDENTITY FOUNDATIONS

The name change and freemium business model both meant entering new territory for Preseria, marking a distinct shift away from the professional business-to-business world of Conference.

The name Slidedog is of course an allusion to "sly dog", and it already carries a certain latent personality. This was the personality that the identity work had to try to bring out; a sense of attitude, light-heartedness and charisma.

The overall mood and personality also set certain expectations for the program itself. A user having no prior knowledge of Slidedog might easily be mistaken thinking it's a mobile app; the associations are certainly more in line with apps than traditional office and productivity programs like Powerpoint.

These are generally beneficial associations, implying characteristics like immediacy and ease of use, as long as the end product is able to live up to expectations. A potential downside is the risk of not being taken seriously, and the product's identity had to walk this balancing act.

BUILDING AN IDENTITY

In order to reach a wider public with Slidedog, the new service needed a website. This process coincided with the identity work, so that the web design process became a testing ground for the new identity.

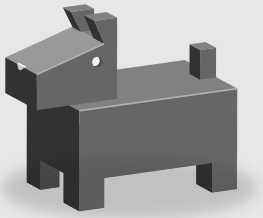
After some quick iterations around different logos, logotypes and color schemes, we started to work on the website itself, to get an idea of how the identity elements could be applied. These elements are described in further detail later in the report.

The overall tone of the website was kept playful and analogue rather than the professional glossiness of many competitors. This was a conscious choice both to communicate that Slidedog still was a work in progress, and that the product represented a new approach to presentations for Preseria.

From the inception, Slidedog would be presented as it's own entity without any visible link to Preseria Conference

Abstracted cartoony silhouette

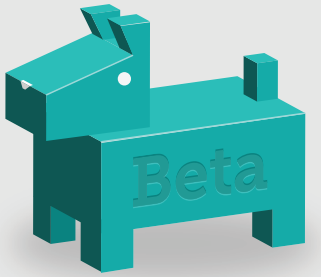
Cartoony with a higher level of detail



3-dimensional shaded version

SlideDog SLIDEDOG SLIDEDOG SLIDEDOG

A selection of some of the different logotype variations



SlideDog

The chosen logo and logotype

SLIDEDOG.COM

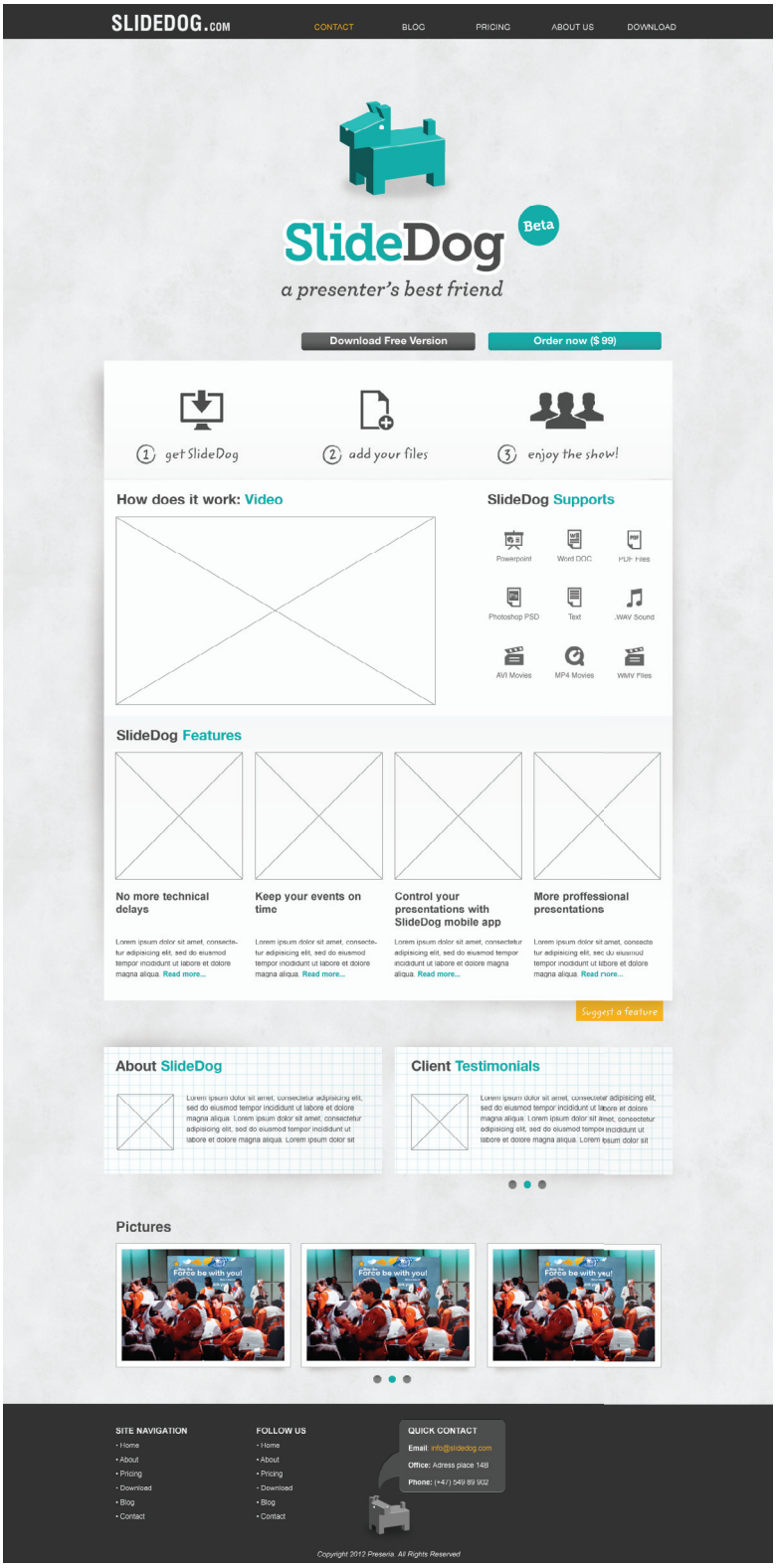
WEBSITE FUNCTIONALITY

The website's main purpose was as a showcase for the product, and to clearly and directly communicate the functionality of Slidedog.

With the limited timeframe, we decided on a rather traditional static layout built on the Wordpress engine, to ensure straightforward implementation and easy maintenance.

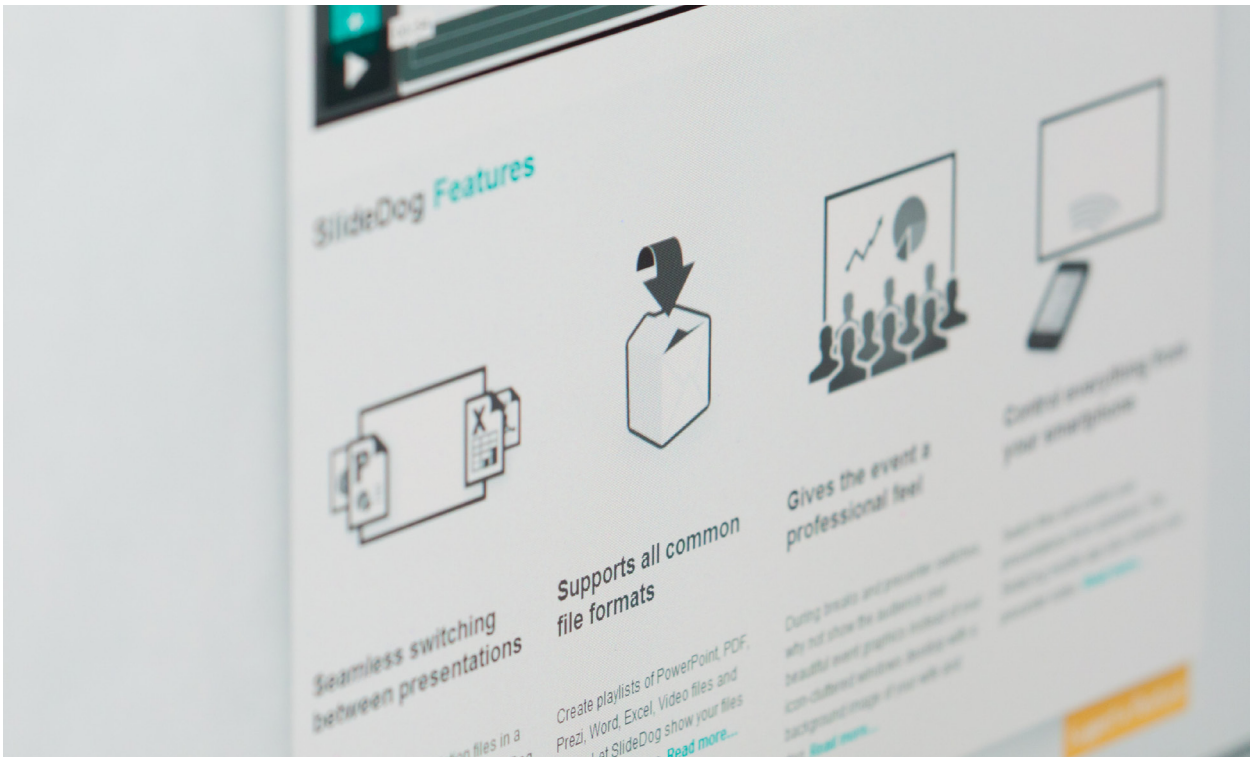
A rough specification for the website was worked out in collaboration, with the main focus on a content rich landing page. Additionally, separate layouts were designed for downloads, features, support and a development blog.

The final design proposal was sent to an external agency for coding, while the project's focus shifted onto the design of the Slidedog application itself.



Layout of the main landing page, the rest of which can be seen at www.slidedog.com

The final implementation stayed very close to the original designs.



7

PUBLIC BETA

The public beta development was the process of building our minimum viable product (MVP) for the service. A lot of the design decisions up until this point rested on assumptions, and the goal was to bring the product to the public quickly so that these hypotheses could be tested and hopefully validated by real-world usage.

This meant that the MVP had to build on the existing work and technology platform of Preseria, so in a sense the design process started mid-race and not from a completely blank slate.

The hypotheses most in need of testing at this point were the user needs and value offering from Slidedog. In order to get feedback on these needs, the MVP had to be brought up to the level of a relatively functional and polished product, so that users could evaluate it on the right terms and not be blinded by bugs or half-finished work.

The focus of the work during this phase was therefore mostly on the user interface; working towards improving the layout, appearance, look and feel and usability of the existing functionality. This had to be up to par with users' expectations for a consumer product. The focus was less on adding new functionality. There were many omissions, and ideas for features or improvements that didn't make it into this version. These were documented and put on hold until the next iteration.

THE MINIMUM VIABLE PRODUCT HYPOTHESES

The beta release would represent the minimum viable product for Slidedog. This product rested on three fundamental assumptions about its value to users, it's target users and it's potential for growth. The goals for the public beta release would therefore be to bring the product up to a level where it could provide validated learning about each of these assumptions.

> *"Having a low-quality product can inhibit learning when the defects prevent customers from experiencing (and giving feedback on) the product's benefits."*
>
> *Eric Ries*

VALUE HYPOTHESIS

Slidedog creates value for users by providing a single interface to handle presentations with multiple files. This value will depend on the interface being quick and easy to use, and on it being flexible enough to support any type of presentation media. In order to provide value the user also has to feel a sense of confidence or trust in the program.

USER HYPOTHESIS

The users who benefit most from Slidedog are not professional speakers, but rather individuals without this level of experience or expertise who need to give complex presentations.

GROWTH HYPOTHESIS

By presenting the product as a free offering, it can grow a large base of users who will value the product enough to later become paying customers. Presenters using Slidedog in front of an audience can help drive this growth by exposing a large number of people to the product.

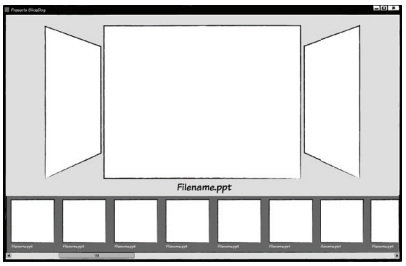
PRIORITIES

The question was what level of functionality and polish the product needed to be at in order to effectively be able to answer these hypotheses. With a timeframe of about three weeks from the start of the iteration to release, it would be a question of priorities between the two.

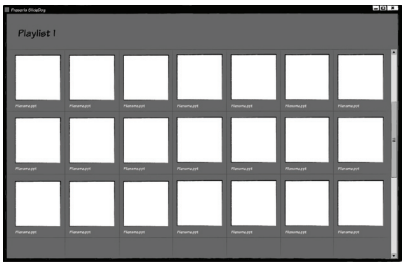
We decided to focus on refining the functionality that was already in place in Preseria Presenter, and on lifting the usability and polish to a level where it was representative for a commerically ready product.

This would allow users to evaluate the product on its actual merits rather than having to grapple through half-finished work and bugs. Taking this approach would also ensure that users who found value in the core functionality would remain loyal and not quit in frustration.

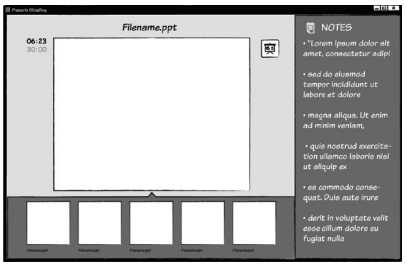
DESIGN PROCESS
EARLY IDEATION



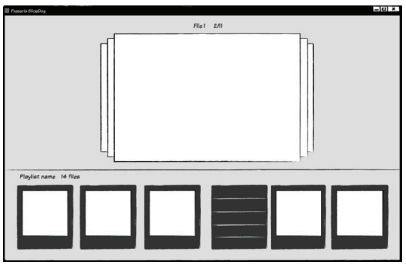
Using familiar cover flow principle to display next and previous slides.



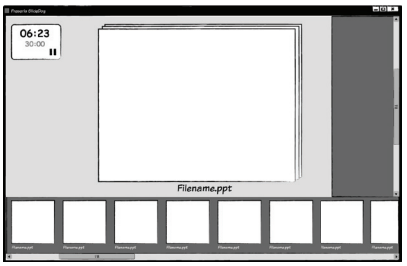
Grid-view for organizing slides.



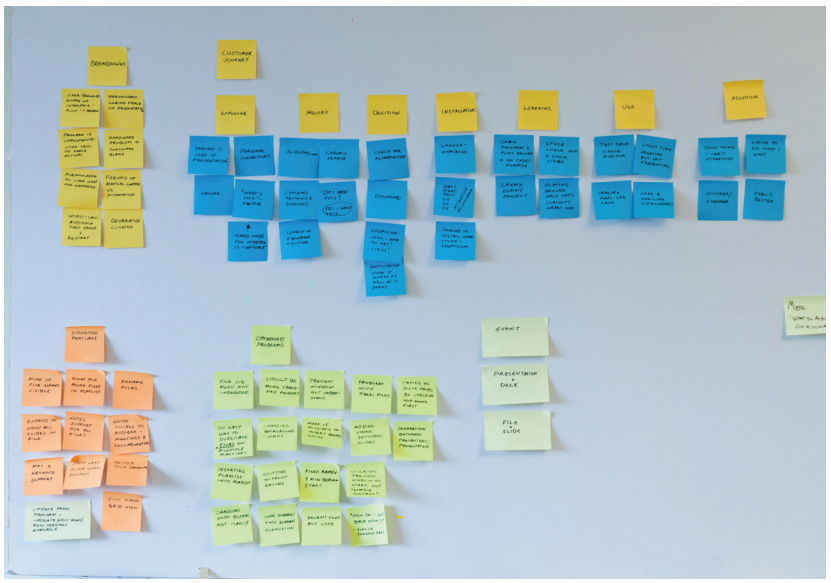
Three-part layout with notes. Current slide always centered.



Displaying files as cards.



Stacked slides mimic real-world note cards.



A lot of the ideation up until this point had been focused on new functionality, especially on new ways of representing files and displaying content in the interface. Given the new set of priorities, a lot of this work had to be put on hold, or refocused in terms of working with the existing framework of Preseria Presenter.

PROCESS
IMPLEMENTATION

Starting the development for the first public beta release of SlideDog was the first real chance to work together with Preseria, and naturally it was a learning process for both parties, getting acquainted with each other's work methods.

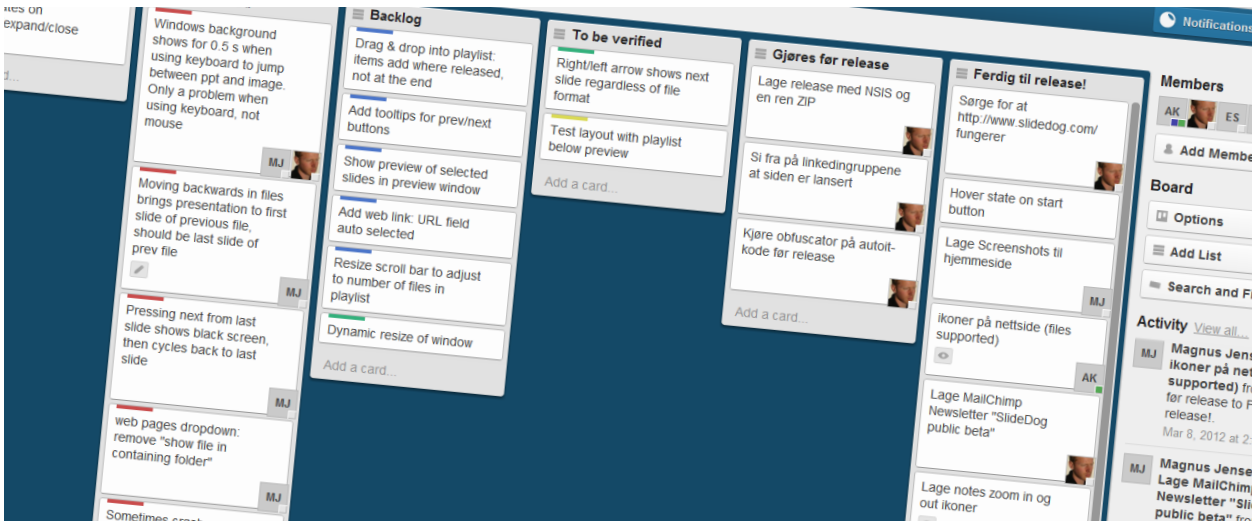
Having done corridor testing and a usability review of the current program, there was a quick ideation period based on the identified problems and rooms for improvement. The team then went through these ideas together, listing and prioritizing the tasks and goals before the release.

This process was also a chance to test how the design methodology could be adopted to an agile programming environment. A first step was to create a common project environment where everyone would have an overview of the progress on the different parts of the project at any time. This was done in Trello, a collaboration tool based on agile and SCRUM principles.

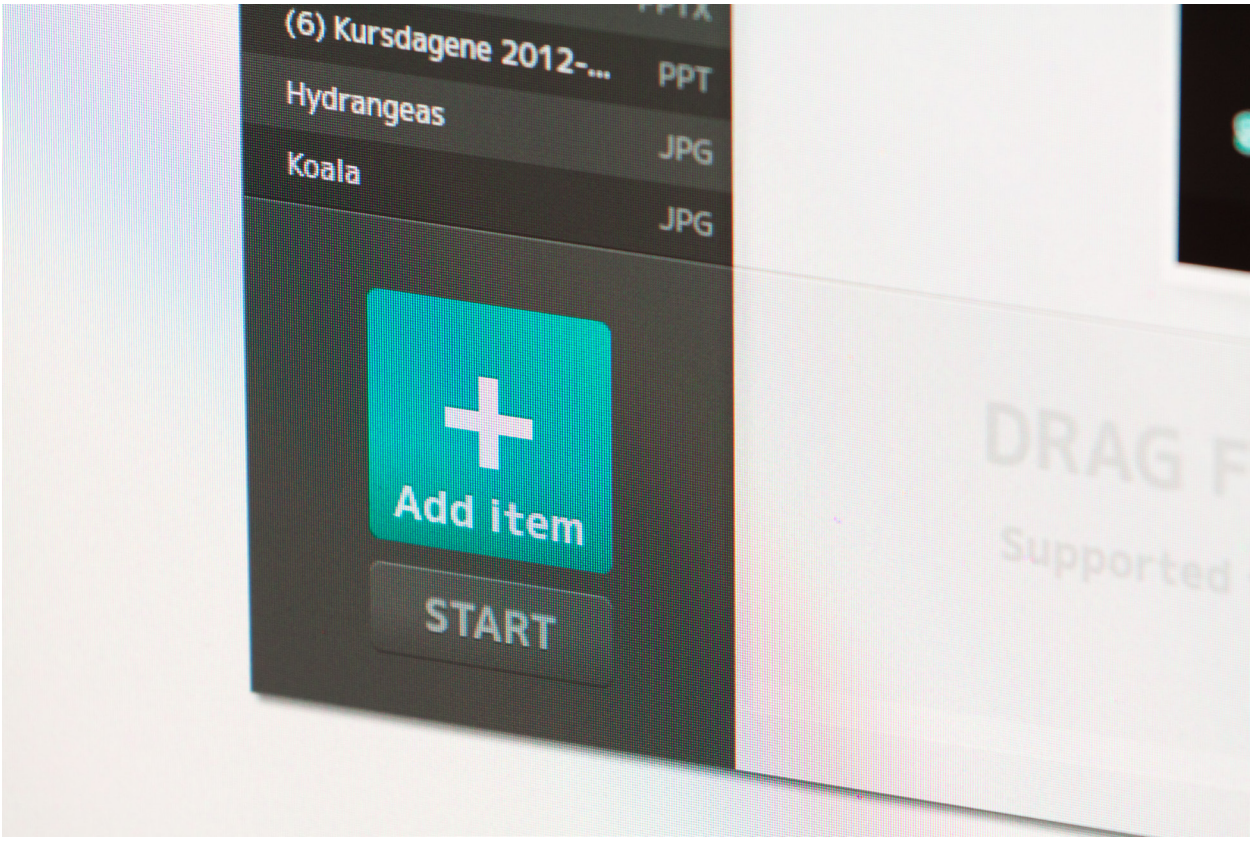
As a designer, there are challenges to working within this very task-based environment. Tasks have to be deconstructed into their component parts, which is quite straightforward for programming, but less so for parts of the design process.

For the earlier explorative designs or for abstract concepts like the overall look and feel, this deconstruction makes little sense. Further into the process when tackling the interface at a feature and detail level, it became a much more valuable tool to structure the work and to synchronize efforts on particular parts of the interface.

Having this shared project environment was also very helpful in driving progression forward, without getting stuck on small details or endlessly reworking the same feature. With the entire project visible on the same board, there was an immediacy of seeing the current progression and remaining work. The satisfaction of seeing cards move from the ideas list to work in progress all the way to being ready for release was also very tangible.



Working with agile project management tools: Structuring the project after kanban principles of boards, lists and cards. The picture shows trello, the tool used, near the final release date.



Seeing the immediate consequences of design decisions on the working program.

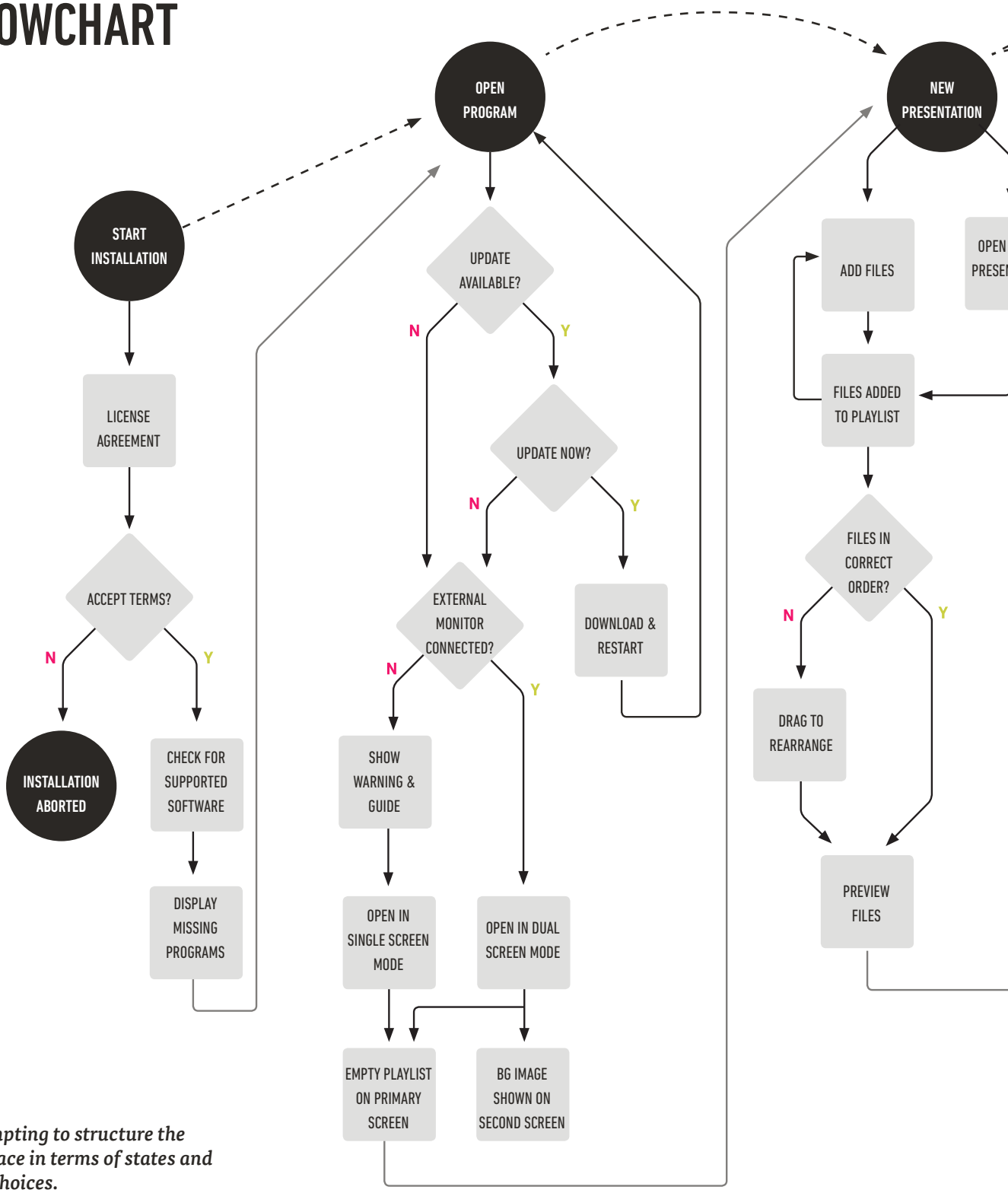
This agile process is also forgiving in terms of project continuity. The first backlogs were built without a good understanding of each other's capacities, and consequently they aimed too high, too fast. It became clear relatively quickly that many of the planned ideas and features would not make it into implementation in the given timeframe. Instead of being scrapped completely, they could simply be moved onto the board for the next development cycle, making the prioritizing much easier.

The main challenge was not getting completely lost in this tasks-and-features mindset, and thereby losing track of the holisitic prespectives.

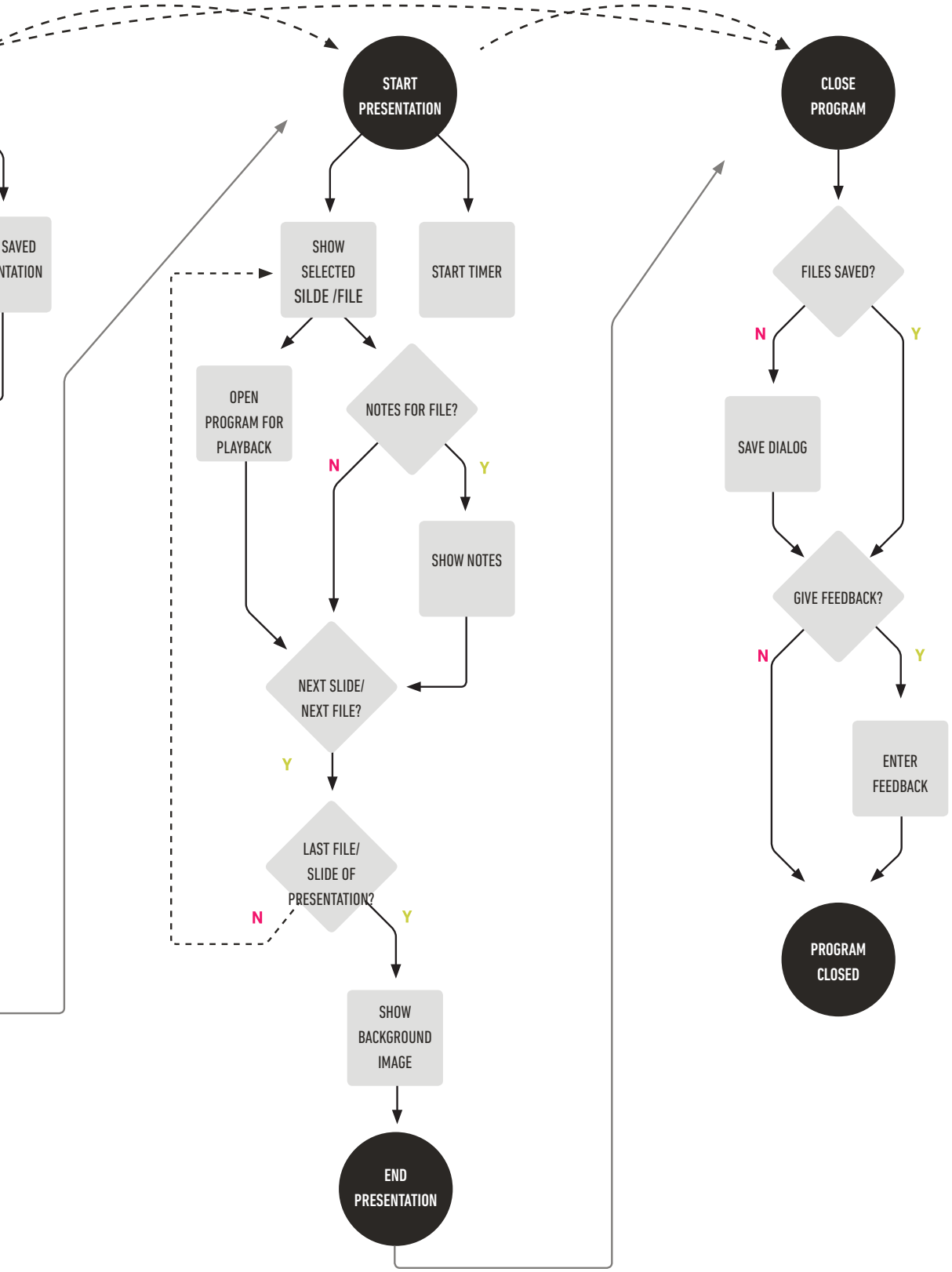
We tried to keep design and implementation running parallel. This meant not having any complete designs or specifications ready before starting the development, and in many cases no more than wireframes or rough sketches. After 2-3 day head start of roughing out the overall layout, structure and look and feel of the application, we started implementing the design.

As a designer, the goal was to stay slightly ahead of the programmers, but not by much more than a day's work. This meant that we would generally be working on the same areas and facing the same problems, giving sparring opportunities and allowing quick testing and subsequent adjustments to the design.

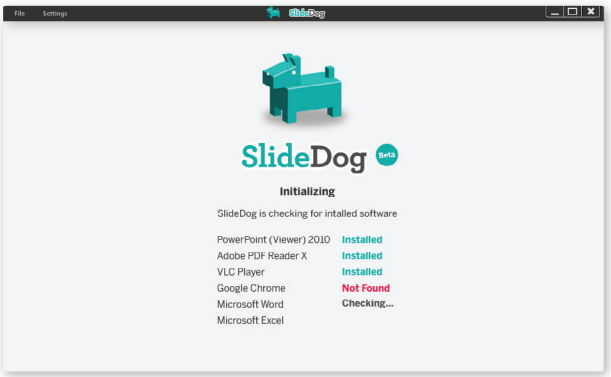
FLOWCHART



Attempting to structure the interface in terms of states and user choices.


SAVED
NTATION
START
PRESENTATION
SHOW
SELECTED
SILDE /FILE
START TIMER
OPEN
PROGRAM FOR
PLAYBACK
NOTES FOR FILE?
N
Y
SHOW NOTES
NEXT SLIDE/
NEXT FILE?
Y
LAST FILE/
SLIDE OF
PRESENTATION?
N
Y
SHOW
BACKGROUND
IMAGE
END
PRESENTATION
CLOSE
PROGRAM
FILES SAVED?
N
Y
SAVE DIALOG
GIVE FEEDBACK?
N
Y
ENTER
FEEDBACK
PROGRAM
CLOSED

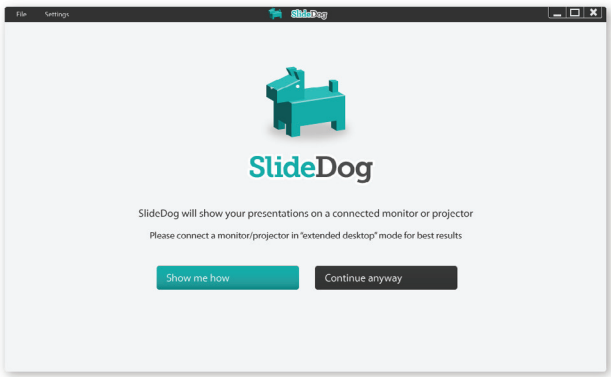
INTERFACE
MAIN STATES



1. Checking for installed software on startup

When the program starts up it performs a check of whether the different presentation players are installed. This check is completed progressively so the user can follow along, and any missing programs are highlighted in red.

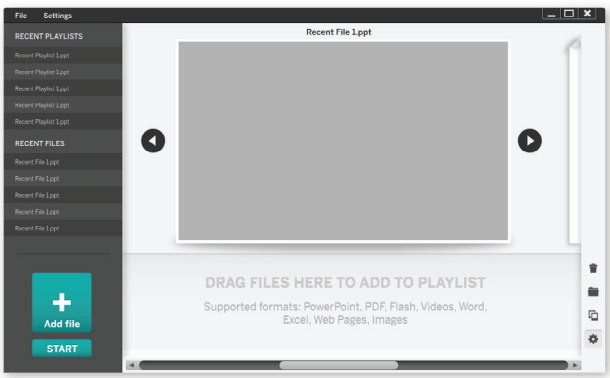
A prior version displayed direct links to download the missing software, but this was deemed intrusive by users. The sequence now only serves as a reminder, and is hidden once the check is complete.



2. Reminder about extended desktop

The program also checks whether multiple monitors are connected on start-up. The application is primarily designed to show presentations in extended desktop mode with a presenter interface on the primary screen, and the projector or secondary screen for displaying files.

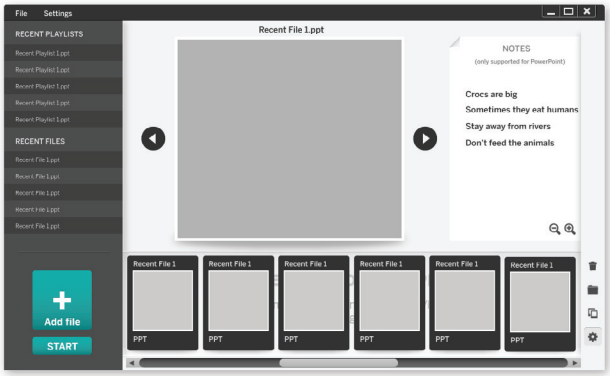
If dual screens are not connected the user is warned, and a link to a tutorial on how to set up dual screens is shown. The user can still continue on a single screen, but the presenter interface will be different.



3. The "blank slate" empty interface

When opening the program, the user is presented with an empty playlist and preview window. The playlist has an embedded text explaining how to drag files into it, as well as which formats are supported. In addition the last used files or playlists are shown in the leftmost column.

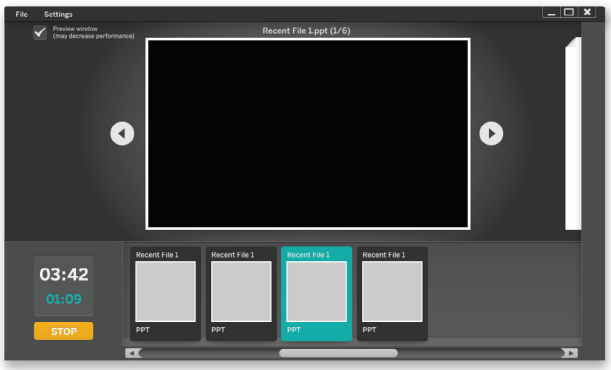
INTERFACE
MAIN STATES



4. Files added to playlist and notes panel expanded

The interface as it appears once populated with files. Each item in the playlist represents an individual file, and their order determines the order in which they will be shown. The rightmost notes panel displays presenter's notes if they are added to the file, and can be hidden or shown.

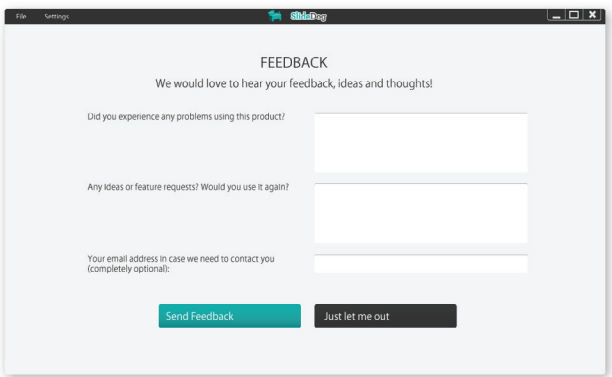
Most of the actions are located at the bottom, with playlist controls on the rightmost toolbar, and options to add files or start presenting on the left.



5. Dimmed presenter view with current file highlighted

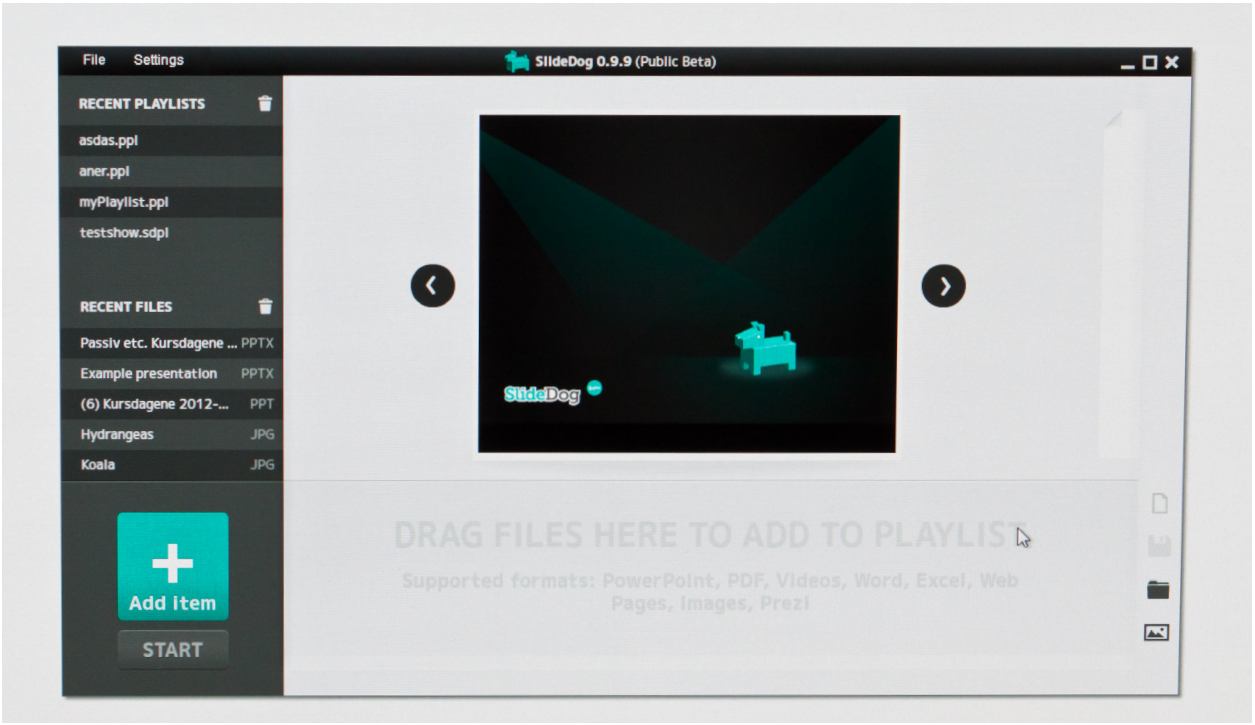
The presenter mode is a dimmed version of the preview interface. The playlist is no longer editable, and both the playlist toolbar and the recent files menu are removed.

A timer is displayed in place of the add files button, showing the total time spent on the presentation, as well as time spent on each file. The currently playing file is highlighted in green in the playlist.

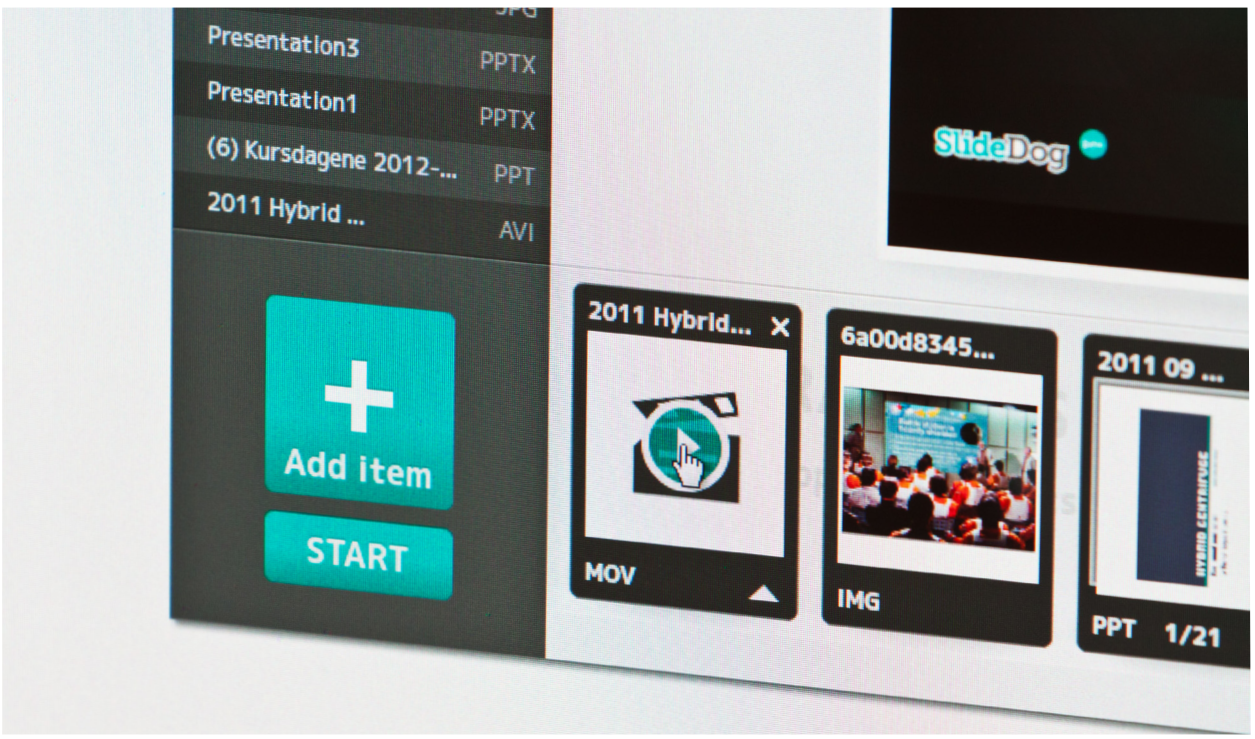


6. Feedback screen when exiting the program

On exiting the program, the user is asked to give his or her feedback. There are two feedback fields, one for describing the experience or suggesting features, and one for reporting bugs. The feedback is anonymous, but it is possible to enter an email address, for instance for requesting support on bugs.

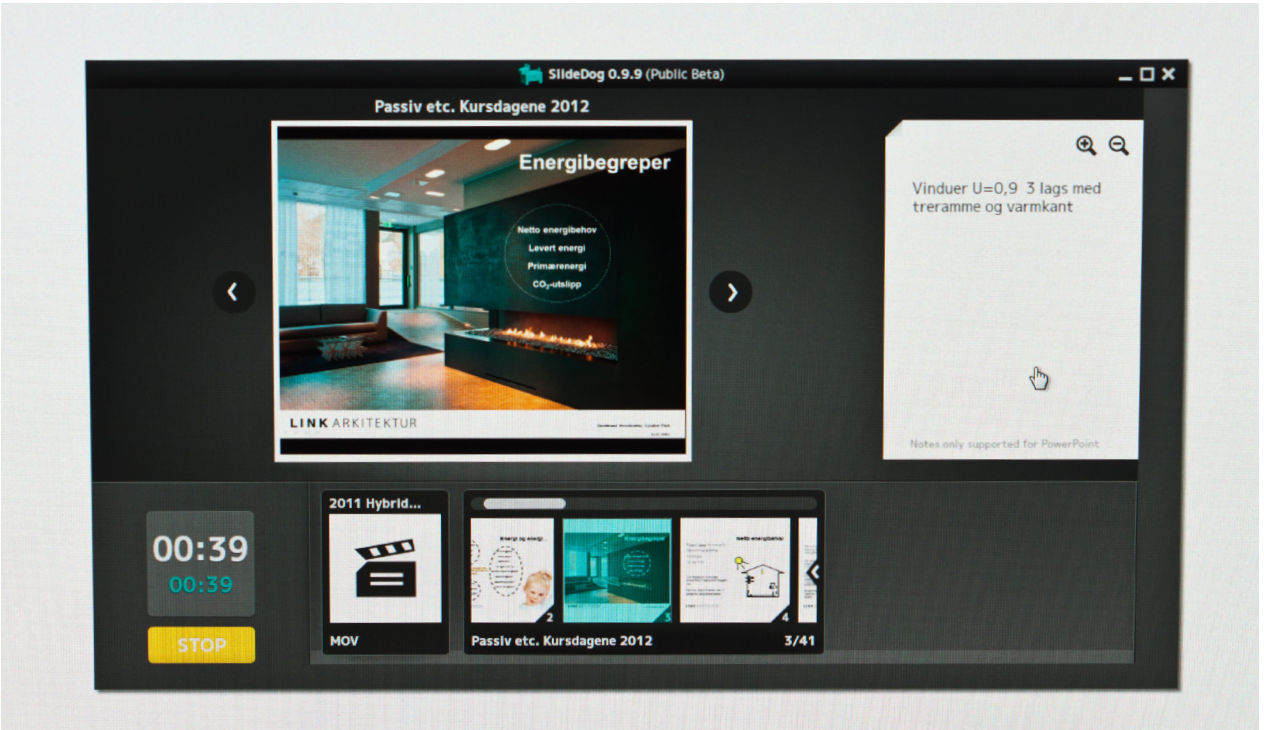


The "blank slate" state of the interface showing an empty playlist and the default Slidedog background. When dual monitors are connected, this background image is shown on the second monitor



Playlist items have contextual actions, allowing the user to start a presentation from any point in the playlist.

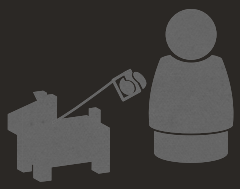
Controlling movies directly from the Slidedog interface.



Presenter view of a presentation consisting of a movie clip, and a Powerpoint file with notes. Previews of the individual slides are shown as thumbnails.

8

USER INSIGHTS



With the beta released, there were multiple channels open to gain insights and feedback from users. We could start testing and validating the hypotheses that the product were built on, in the real world.

The insights we were looking for were generally in one of two categories. The first were the broader user needs that had been the basis for the personas and archetypes. Were these on target, or were we addressing the wrong needs or wrong users altogether? The second goal was to gain more concrete feedback on the product, both in terms of usability and functionality.

In some ways these two goals were mutually exclusive, because seeing and using the product would inevitably have an anchoring effect on the users responses. Usability testing and contextual interviews were therefore largely kept separate, and supplanted with the information we received from the beta testers in the form of anonymous usage statistics and user feedback.

Overall, the top priority in this phase was on discovering needs. These were the insights that could really challenge our assumptions and pivot the project. In order to get these answers, our approach was to try to identify people within each of the archetypes, observe them in a presentation setting and conduct interviews.

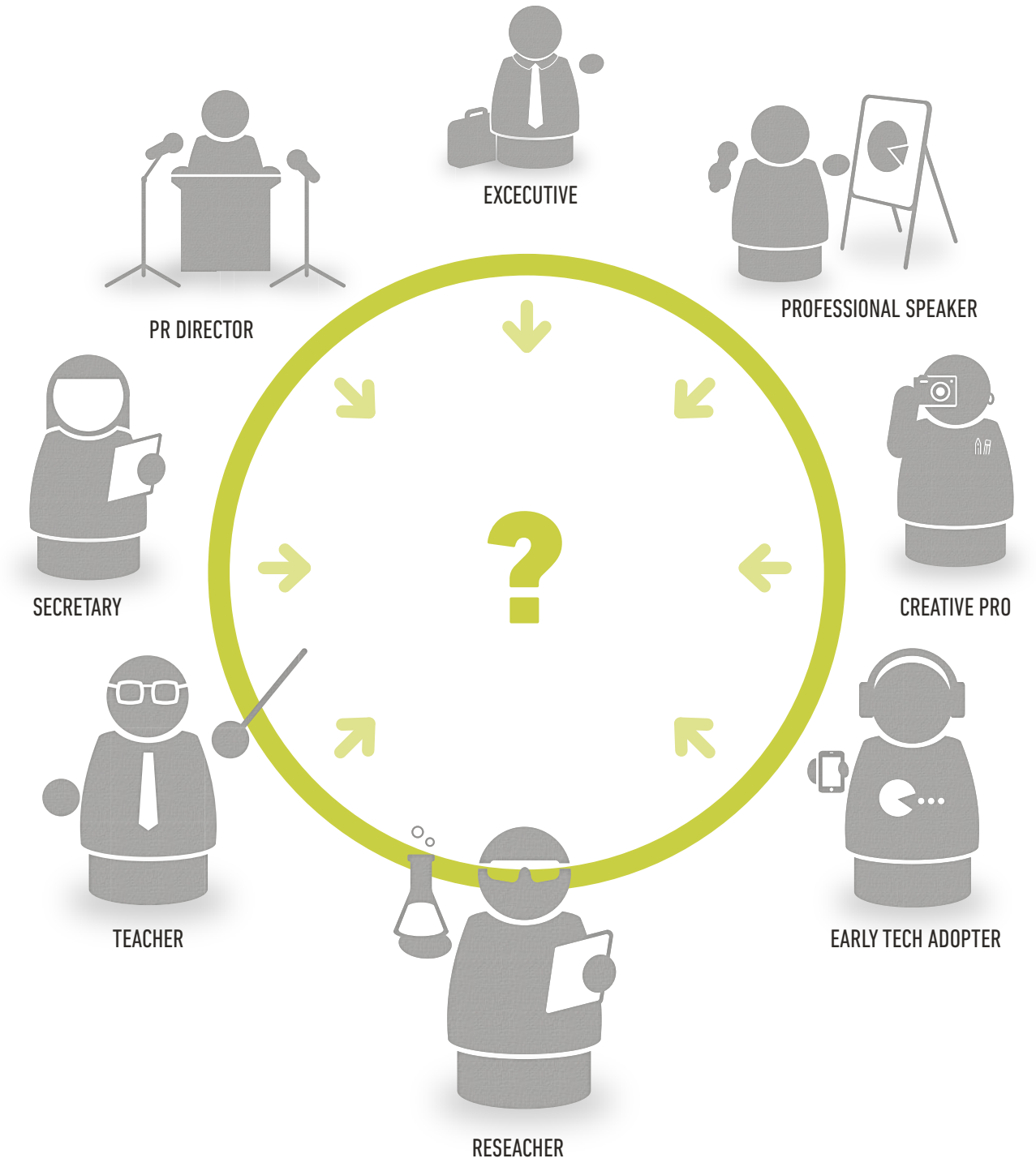
CONTEXTUAL INQUIRY
GOALS FOR THE USER INTERVIEWS

The user archetypes identified earlier represented quite a wide span of potential users and different needs. In one sense, this was positive in opening up different directions for the development of Slidedog, but at the same time it presented a challenge in keeping the project focused. We were looking to test the assumptions made about user needs against real-world knowledge.

The approach was to try to identify people that might fit within each of these archetypes, and to learn about their relationship with presentations first-hand. The focus was on gaining qualitiative information about the user groups that might supplement the metrics and usage statistics available from the beta users.

We tried to approach potentinal candiates in an open manner, and to avoid pushing Slidedog as a solution to their problems. Instead, we looked to observe users in their own environment and conduct follow-up interviews to learn how their needs were currently being serviced.

In the end, 5 interviews were conducted in addition to a large number of observations in different settings. The identities of these people are kept anonymous in order to allow the material to be made public. The interviews are not represented in detail here, but some of the key findings are summarized.



Collecting insights from the range of identified user groups. What were their actual presentation needs and workflows? Could Slidedog really cater to this wide range of needs?

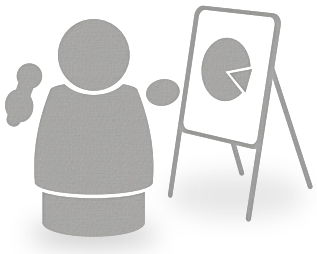
INTERVIEWS
USER COMMENTS

"What I really want is a good set of portable speakers. Sound is always a problem ... and I always want a timer on my screen"

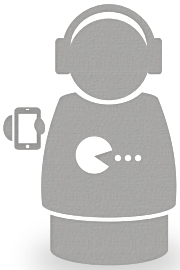
"So many people use PowerPoint totally wrong"

"I don't really rehearse, even though I should. A lot of times I end up wingin' it."

"I always show up one hour before the presentation to set everything up"



"I understand that people who use PowerPoint professionally spend a lot of time learning the features. But I don't get paid to do this so I don't have the motivation to learn it"



"Body language is half of what I use to communicate"

"It feels easier to tell a complex story this way" [with Prezi]" I like the sense of uncovering one part at a time"

"Using a mouse is such a hassle"

"If you really want to engage an audience you have to have a clear story from A to B"

"What do YOU want me to speak about?" [letting the audience direct the presentation]

I hold these presentations 10 times a year... Thankfully!"

PROFESSIONAL SPEAKER

Professional speaker and educator who holds about 100 talks annually. Enjoys the intensity of being on stage, but likes to be in total control of the settings. Very conscious about presentation techniques.

COMMUNICATIONS DIRECTOR

Communications director of a local cultural institution and former journalist. Prefers speaking to like-minded audiences. While he rarely has time to thoroughly prepare presentations, he is comfortable improvising in front of an audience.

TECHNOLOGY ENTHUSIAST

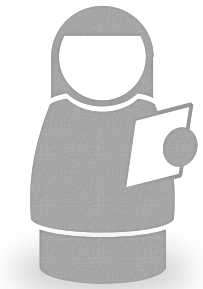
Social entrepeneur who often holds talks about his company and background. Aspiring proffessional speaker and university lecturer, who enjoys presenting. Actively experiments with new ways to improve his presentations.

"Most people have way too advanced computers... They would be better off with a milk carton with a keyboard on it"

"If I were to use this I would have to see that it works well from someone else first" [first reactions to Slidedog]

" .. like the flower bouquet? Meaning you should wrap up soon.." [ways to keep speakers on schedule]

"I always feel insecure about this. I'm impressed with people who can just skip around in presentations and edit things on the fly"



"I won an award for best speech at a Hydro conference that year. I think it was the excitement.. I just showed one slide but I was walking around and pointing and waving trying to explain everything"

"I just decide that this is something I need to have" [software used at the office]

" I can sit in the audience, I don't have to be up on stage" [the potential of arranging events with Slidedog]

"I can't really make them, but I can twist them" [uses predefined powerpoint templates for his presentations]

OFFICE ADMINISTRATOR

Works as office adminstrator in an investment firm. Has previously worked in the pharmaneutical industry. In charge of arranging meetings and events at the office, as well as an annual conference. Does not enjoy the responsibility of managing events.

ENTREPENEUR

Entrepeneur running a business in the technology sector, and longtime member of various boardrooms. Generally skeptical towards computers and software, and feels uncomfortable trying out new and unfamiliar technology.

LIVE TESTING
MIXER 2012

BACKGROUND

The first real testing opportunity for the new product came was through the event Mixer 2012. Mixer is a gathering intended to bring students and local businesses together, and the main event is a series of inspirational talks by various professional speakers. Mixer is organized by student volunteers from Start NTNU, none of whom had any prior experience running events at this scale. They agreed to use Slidedog to run the show, and we had the opportunity to observe both the preparation beforehand and the live execution as well as talk to the volunteers.

The live setting with a real audience and external speakers gave the use context new dimensions of intensity and purpose that would have been hard to try to recreate in a controlled usability test.

PREPARATION & EXECUTION

The program included presentations from 4 external professional speakers and a moderator, as well as short pitches from local business representatives and members of Start NTNU.

Two members from Start were in charge of putting together the files from the different speakers. The deadline for speakers to send in their files was set to the day before, but several files were still missing, causing major stress.

Everything was thoroughly rehearsed and checked, manual recreating the same playlist on a second computer to use as a backup.

The first half of the show went without a hitch, but a technical bug caused major frustrations during the second half. The start members were supervising the presentations in Slidedog, constantly interacting with the playlists to preview the upcoming files.

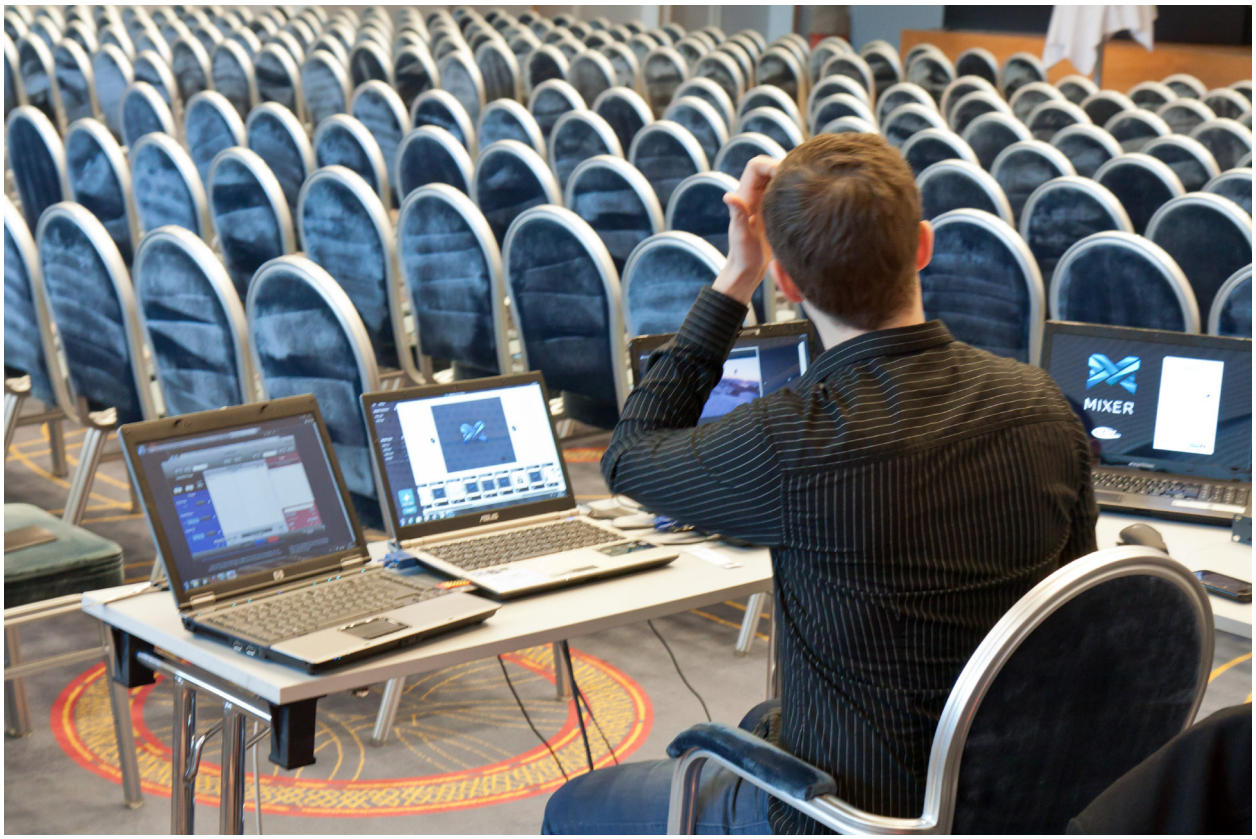
The speakers on stage were controlling their presentations with a clicker, and sometimes these simultaneous inputs caused the program to jump ahead, changing slides instead of files.

REACTIONS

Even though the bugs were painful to watch, the reactions of both speakers and organizers were very eye opening in terms of the consequences of errors. The unexpected events were immediately disruptive to the speaker who lost track of her train of thought.

Neither user received any feedback from Slidedog on the error, and both tried to correct the problem. The speaker first suspected the clicker to be faulty, pressing harder and faster and getting further lost. The organizers simultaneously tried to get back on track, eventually switching over to the backup computer.

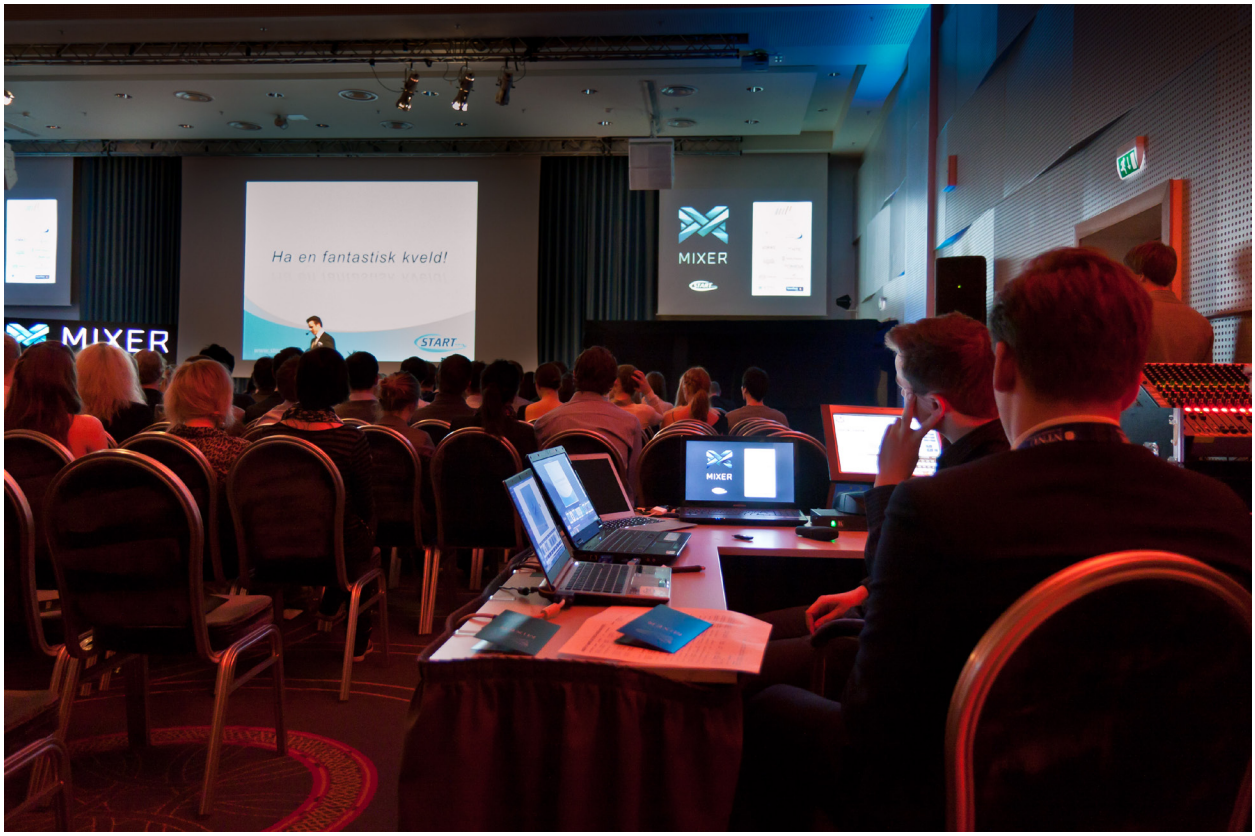
At this point the presenter was at a complete loss, asking the audience if someone there was playing a prank on her. Eventually she conceded control. "Now I'm not going to touch anything and hope that things work".



10 min before the start of the show, the files from two of the presenters were still missing. The size of the event and venue were a bit larger than expected.

The entire Mixer arrangement as a single playlist in Slidedog. The background image is manually added inbetween each of the presenter's files.

The Start NTNU volunteers were running the presentations from Slidedog, while the presenters on-stage used clickers and didn't have access to the presenter screen.



Supervising and controlling the show from the technicians desk. Two computers were running duplicate Slidedog playlists in order to have a backup. In addition there was various A/V and switching equipment, as well as a Mac for the Keynote presentation of one speaker.

OBSERVED USABILITY ISSUES

The event was way too large to fit within the playlist.

All of the interactions were done with a trackpad, making it harder to drag files.

Confusion between single and dual monitor setups: "How do I get out now?"

Keynote not being supported was a major frustration

The program was closed without saving, losing several edits to a presentation

There are no forms of feedback for bugs or errors.

Multiple users interacting with the program can potentially create unexpected and confusing situations.

The background image doesn't serve it's intended purpose. It needs to be visible inbetween the files of different presenters.

The "recent files" menu is a useful workarund when the same files are repeated within the playlist.

"Can you add a playlist into a playlist?" - the need for an additional level of hierarchy

Context menus for files, the behavior of the preview window, and the "click to enable control" option are all hard to understand.

Users dragged files onto the "Add items" button (unintended, but works)

Users looking at the top menu first for guidance when stressed

USABILITY
CORRIDOR TESTING

APPROACH

After having the beta release ready, several quick and informal corridor tests. The candidates were young designers and engineers who were technically proficient, but without any prior experience with Slidedog.

The tests were conducted on a computer with Slidedog already installed, with a second monitor in the place of a projector. The tests were mainly observations of first time use, without any strict set of tasks to complete. The candidates would try open and play around with the program, thinking aloud. If the progress stopped, suggestions for tasks would be given or questions asked, such as starting a presentation, changing the background, adding web files or checking notes.

The tests gave a rough feeling of how understandable the program was and uncovered several obvious deficiencies. However, the tests' validity in terms of actual presentation usage is likely low, because the settings are vastly different. The presentation context is hard to recreate in a controlled setting, both in terms of hardware, audience and stress. Consequently some of the tasks became mere hypothetical excercises where the candidates had a hard time understanding the motivation.

FINDINGS

The preview screen is confusing: Users expect to be able to select an item in the playlist and have it show up in the preview window.

Background image is confusing, both in terms of when it will be shown and what purpose it has.

Users expect that the files are being read and shown by Slidedog directly, don't seem to notice that there are other programs running for the different files.

Adding files to the playlist becomes confusing once the number of files increases, and visual feedback is lost because the last file is hidden.

When dragging files into playlist, users expect them to appear where dropped, and not at the end of the list.

Users don't notice or understand the file options button.

The second timer showing time spent per file is confusing to some users.

None of the users understood how or why to enable control of the preview window.

Some expected playlist actions are missing, such as copy and paste.

Suggestion to let the user rename files.

CONCLUSIONS

The users mindsets seem to vary depending on what programs they are familiar working with. The main interaction concepts in the playlist were easy to most users, such as adding and rearranging files, as well as starting presentations and changing slides.

Designers in particular had this mouse-first mentality of wanting to manipulate everything with the cursor, for instance by dragging files into the trash can, or dragging the recent files into the playlist.

Other users had a more conservative approach, trying to orient themselves by checking the top menus, button tooltips and right-clicking items. In some of these cases the interface was not explicit enough in communicating the actions they were looking for.

Overall, there was no one single preferrable way to use the interface, at least not within the small sample of users and the short time they spent with the interface. When the interface allowed for different ways to accomplish the same task, all of the alternatives found use, for example adding files both by dragging, clicking the button and from the top menu.

It is probably good to keep these affordances and redundancies so that the program is accomodating to this range of different workflows.

PUBLIC BETA
STATISTICS

3282 *The number of unique visitors on Slidedog.com in the period March through May*

959 *The number of unique downloads in the period March through May*

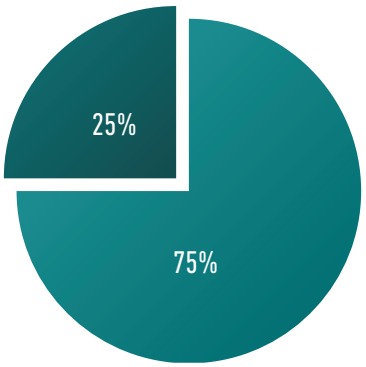
USERS

The total number of visitors has been moderately low, reflecting the low marketing efforts. The encouraging figure is the high percentage of visitors on the homepage that download the product, at close to one in three.

This is an indication that even though Slidedog is still largely unknown, it does strike a chord with users who discover it. Visitors seem to acknowledge the need, and the value proposition from Slidedog.

Percentage of returning visitors on Slidedog.com

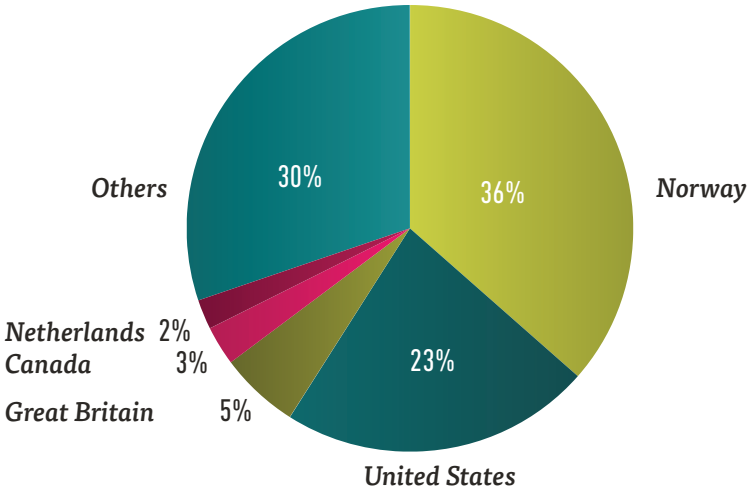
Percentage of new visitors on Slidedog.com



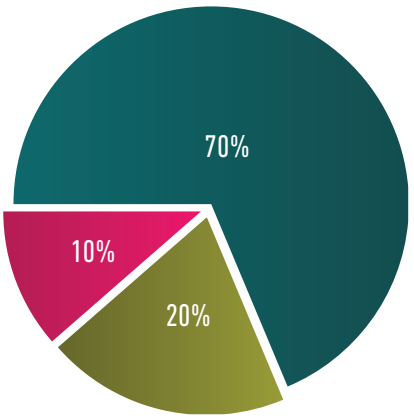
LOCATION

Worth noting is how international the response has been so far. All of Preseria's existing Conference users are Norwegian, and the only ones reached by the word-of-mouth type of news.

Still this accounts for only about 1/3 of the total visitors. The early adopters are mainly located in typical technologically advanced countries, but there has also been response from places such as Dubai and Mumbai.



Visitors using Windows



Others (mainly iOS and Android users)

Visitors using using Mac OSX

OPERATING SYSTEMS

The distribution of users across operating system is about what might be expected, and roughly proportionate to the user base of each. However the Mac users have responded well to the offering and have been vocal about getting Slidedog support for OS X

ONLINE FEEDBACK & USER RESPONSE

Jeg synes virkelig det har potensiale! Enkelt og greit bruker grensesnitt og bred støtte av filformater trekker opp :-)

Sykt stor itterasjon fra forrige løsning

..If it provides what you promised, it'll be great.

Love this software - so much potential!

I've had a quick trial run of Slidedog and I'm impressed. ***Has anyone used it for a proper event or presentation, and if so how well did it work?***

Kanonidé :)

I believe it is an awesome idea and whatever makes Powerpoint presos less boring is super welcome.

Excel er på en måte litt vesentlig...

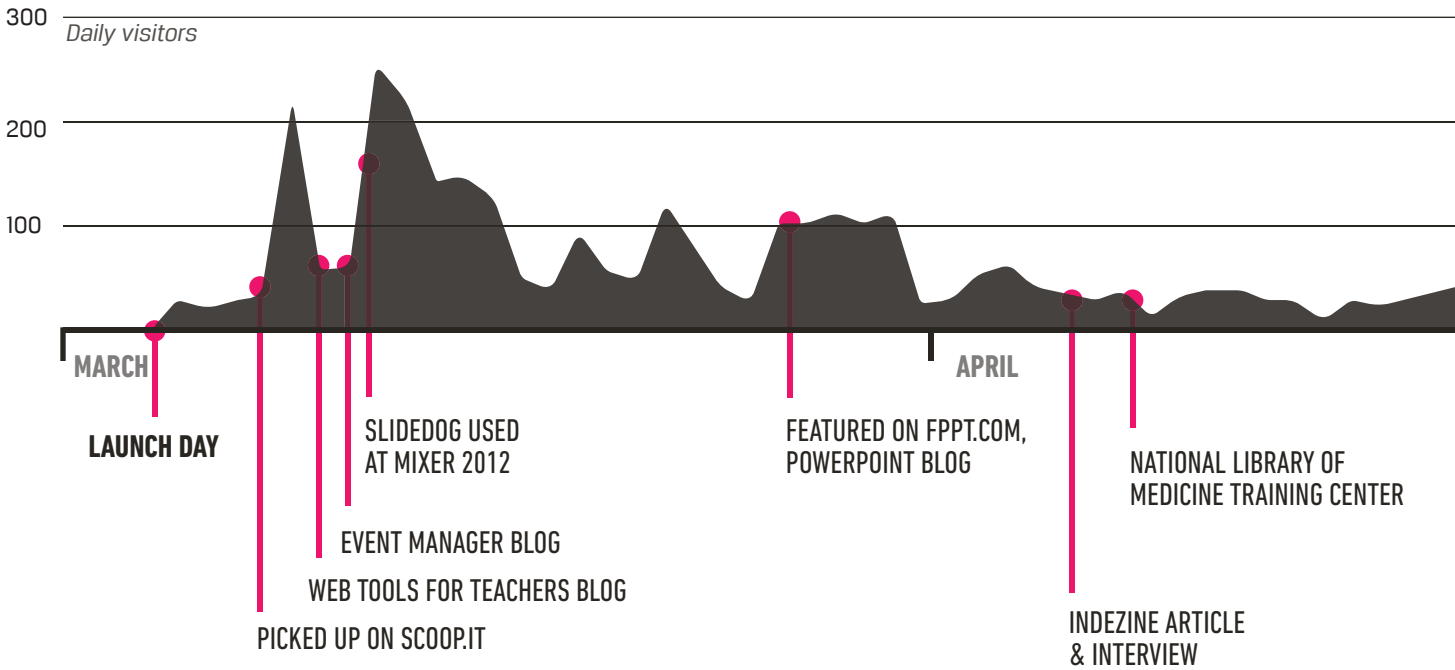
Slidedog looks like it could fix one of my biggest headaches with Prezis, particularly if the transition was seamless.

Ideen er meget god, alltid tull og rot i overgangen mellom ulike presentasjoner..

GREAT!!! But I would need a MAC version. Are you working on this?

Slidedog is a great concept but it just needs to allow for any kind of file input as the user sees fit.

...genialt med en bedre støtte av YouTube!



Just in time! We are having a competition at work. 5 or 6 groups must produce a 15 minute presentation on the same subjec. Our group is sooooo going to win!

I will pass it on to some colleagues as well. They love to try new stuff!

Need to have a full screen view of the playlist where I can see and reoder and manage all of the presentations... a typical setup for me would easily have 30+ presentations

...slidecast using audio files..

I think something around $69 would be a fair price.

Noen ganger kan det være kjekt med notater som alle kan se når man presenterer dokumenter fra ulike programmer...

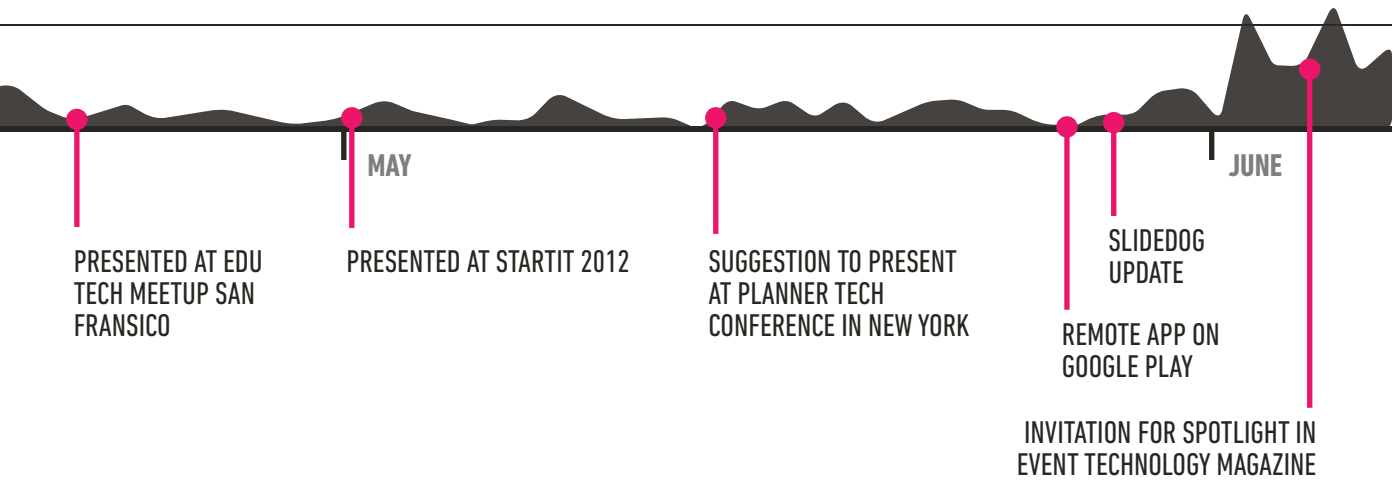
Jeg savner muligheten for å skrive inn notes ...notater er essensielt.

...I see a real benefit to your software in a city council chambers application...

... you've got the making of a great presentation front end.

The only thing stopping us from using it is file management with lots of different presentations

...taking a little too much time to open.



USER DISTRIBUTION

Through the anonymous usage statistics we got some insights into how the program is used, as well as the background of the users from the email adresses entered on the download page. This, when combined with the direct user feedback and the online exposure, reveal som trends regarding the distribution of users.

The early response to the beta release was strongest amongst two user groups; event professionals and educators. This is perhaps not that surprising given that you have to be actively on the lookout for new presentation software in order to discover Slidedog in the first place. The response also correlates with the web media that have given Slidedog exposure, mainly event and education blogs.

The users in the event business span from A/V technicians to large event management firms, and are geographically diverse, from the US to Dubai to Mumbai and New Zealand.

Perhaps more surprising was the interest from the education sector, where users from different American universities appears to be the largest groups.

Other notable signups include several United States employees, graphic and web designers, and some large Norwegian businesses like Telenor and Flytoget.

The large majority of users however, have registered with personal email accounts such as Gmail or Yahoo, making it hard to draw any conclusions except for geographic location.

The main insights from these types of statistics relate to how easy or hard different user groups are to reach, and the effectiveness of different channels. They do however reveal little about the value Slidedog provides in the different settings.

The most immediately responsive groups may very well not be the ones who have the most benefit from the product, rather it could be the user groups who aren't aware of their own needs.

USER INSIGHTS
SUMMARY

There are always last-minute changes to presentations and events.

Users want tools that reduce complexity, not more features and options.

Working conditions at venues are often poor, such as working standing, low lighting or using unfamiliar computers.

The user effectively becomes unaware of the software when presenting. When it defies expectation he becomes painfully aware.

The Slidedog user and presenter may not be the same person.

Many presenters rarely venture beyond a Powerpoint and a video clip.

Presenters harbor an element of distrust both towards software and hardware .

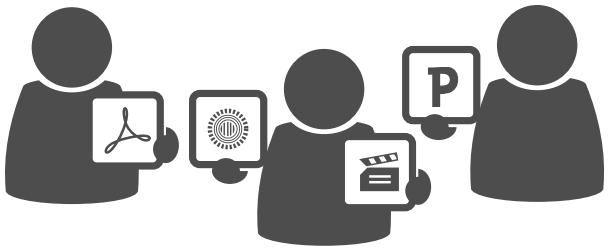
Users want confirmation from someone else before trusting their presentations in the hands of Slidedog.

USE CONTEXT
REDEFINITION

FROM

Individual speakers with demanding presentations

TO



Multiple speakers with different individual preferences

Summarizing the user responses led to a rethinking of the value hypothesis and user hypothesis for Slidedog. The assumption had been that the product's primary value was in for individual presenters, allowing them to combine different presentation media seamlessly.

While users with these needs certainly exist, the presentation techniques and media used appear to be more a matter of individual preference than a subset of users in a specific profession or role. This makes it hard to tailor the offering, and to focus the value of Slidedog.

However, most users seemed to immediately see the benefits of the product for a multi-speaker setting.

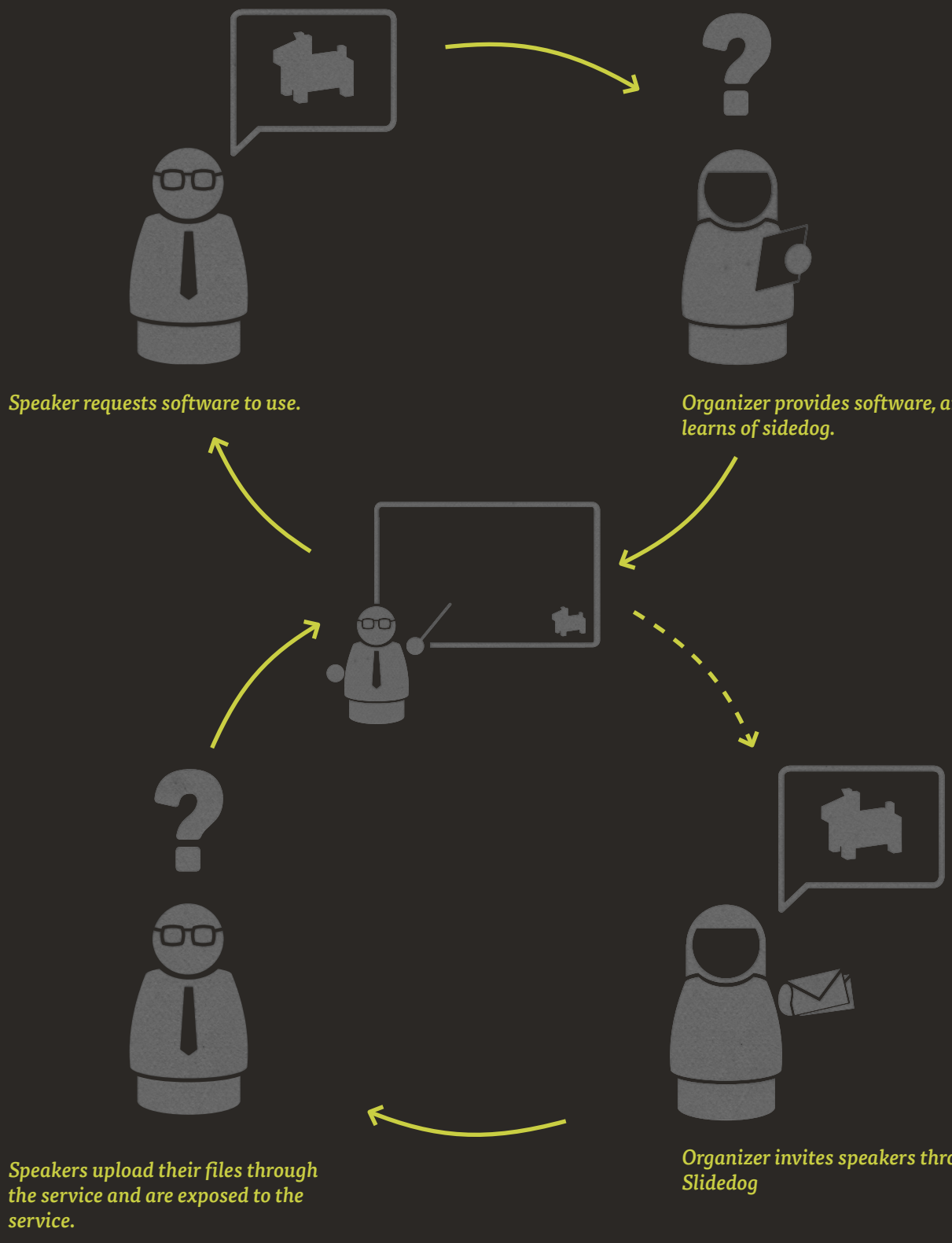
This meant shifting the focus from exploring target users and user archetypes, onto a targeting the right use context for Slidedog.

The situation where the product really appears to shine is for sessions with multiple speakers using the same computer for presentations. Adapting Slidedog for use in these contexts became the primary focus for the subseqent iterations.

GROWTH HYPOTHESIS

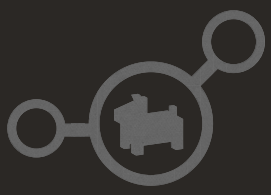
Given this new focus, Slidedog potentially has to become a tool for event organizers or administrators as well as for presenters. Including this new user group could create some new synergies that impact the propsed growth model.

If Slidedog could become a tool used for planning and organizing as well as presentation playback, this would open up new channels of exposure, as depicted on the right.


Speaker requests software to use.
Organizer provides software, and learns of sidedog.
Organizer invites speakers through Slidedog
Speakers upload their files through the service and are exposed to the service.

9

ECOSYSTEM & SERVICE

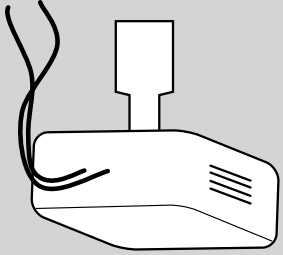


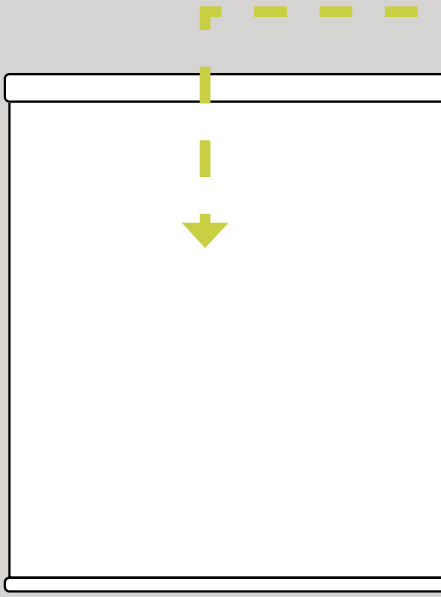
The process up until this point had been quite product focused; defining, building and releasing the minimum viable product, followed by a learning phase.

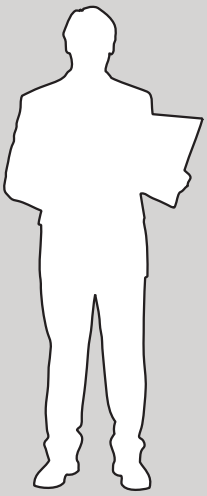
The user insights forced questions about some of the assumptions that the product was built on, and led to a redefinition of the use context for the product. This encouraged a broader look at presentations as part of a larger system, and building an awareness Slidedog's role within this system.

Before starting the build phase for the second iteration, we took the opportunity to digest and structure these insights, which could help better define the course and priorities for the next release. We tried to map out and deconstruct the presentation setting according to different variables; according to user roles, presentation archetypes and various key points in the user experience.

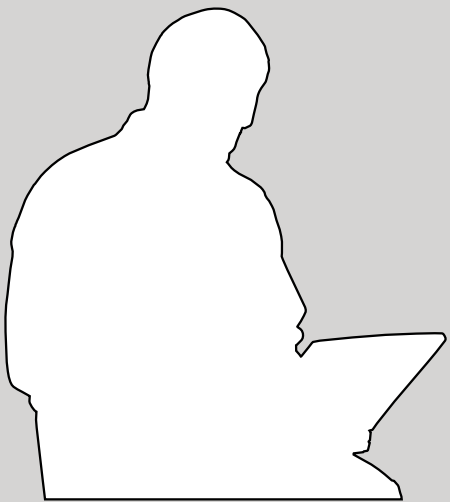
Slidedog is just one of the multiple tools and actors that make up the physical presentation setting.



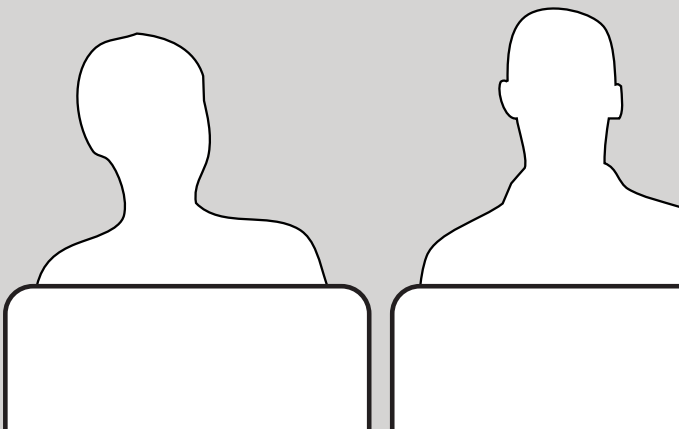


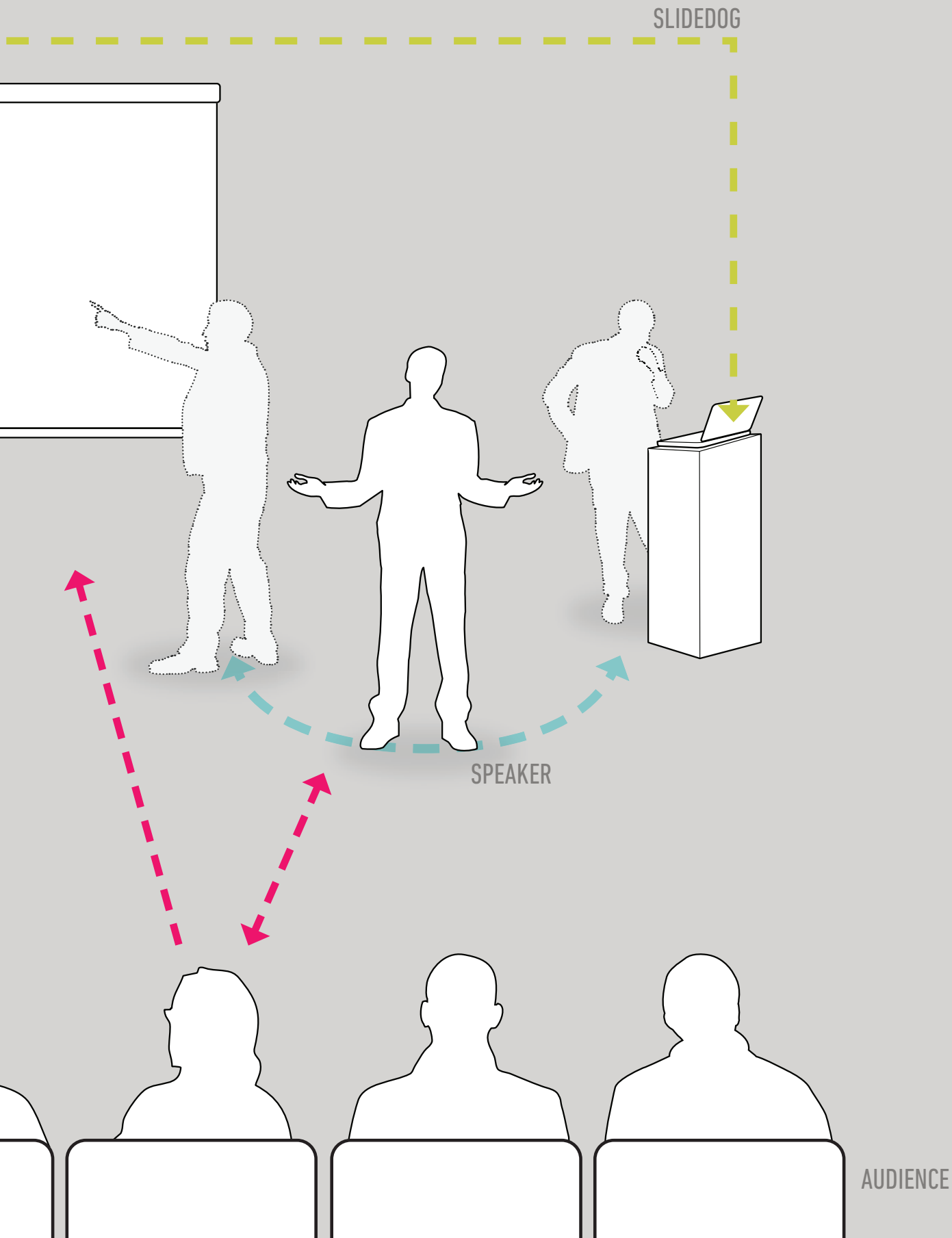


ORGANIZER

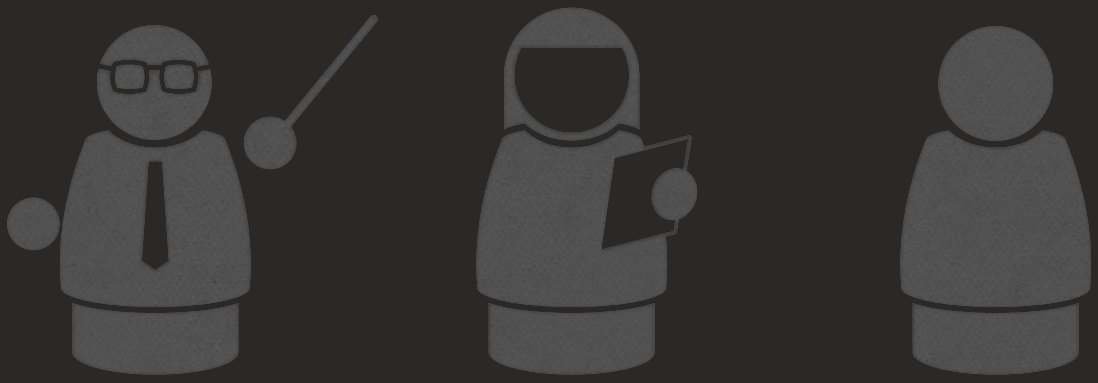


TECHNICIAN




SLIDEDOG
SPEAKER
AUDIENCE

USERS
ROLES



Primary users

Users who actively use the software as a tool to achieve their intended goals.

SPEAKER

One of the primary user groups for SlideDog are speakers that use the software to create presentations with multiple files. Their needs span the range of creation, preparation, presentation and possibly publishing. Speakers will typically be the users most familiar with the software and most demanding of its features

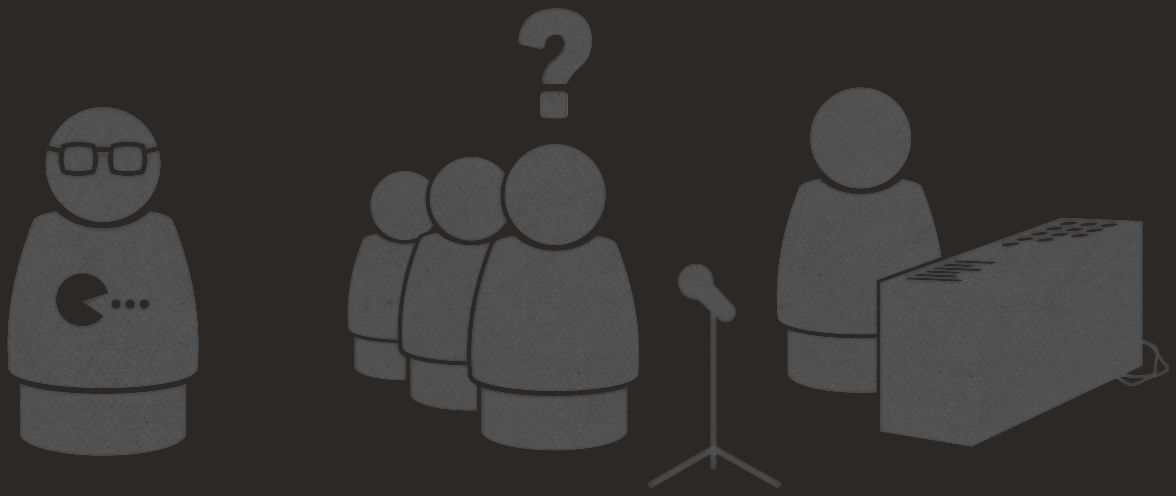
ORGANIZER

Event organizers represent the second major group of primary users. They are responsible for the planning and execution of events; interacting with the speakers, but staying largely invisible to the audience. Organizers are in this case a loose group, whose roles range professional event managers to users with informal responsibilities within a larger organization.

Organizers have needs in terms of managing, structuring and scheduling, but also act as stewards accomodating the varying needs of individual speakers, where the launchpad role of Slidedog could create value.

AUDIENCE

The audience encounters the software as users in the passive sense: they never actively interact with the software themselves, but see the output. The focus of the audience is on the content and message being delivered, and the software is not in their consciousness until something potentially breaks down. To the audience, the software should be invisible.



Secondary users

Users who come in contact with the software, either indirectly or briefly. Their use of the of the software is not the result of an active choice, and they will often only interact with specific parts of the service.

ADMINISTRATOR

These secondary users represent gatekeepers who influence software choices in an organization. They will likely not be directly involved in events, but may encounter the software through installation, maintenance, license management and support. Their needs are not directly aligned with those of the primary users. Administrators do not care what the software itself does, but rather how it works and how easy it is to maintain.

SPEAKER (SECONDARY)

Speakers at events will sometimes encounter the software as a sort of secondary user. If an event is arranged by an external party, the speakers will rarely have any influence over the routines and execution of the event, and may not even be aware of the software used.

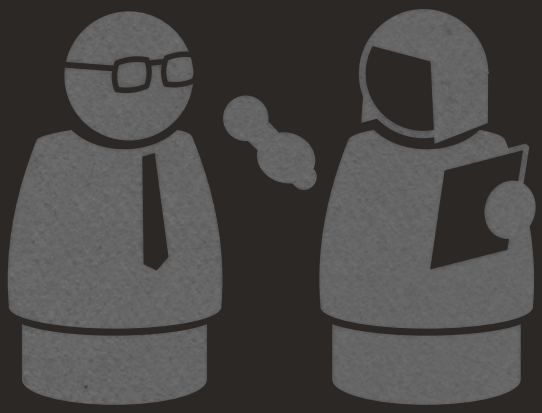
These secondary users will expect the event organizers to accomodate their preferences. The may be skeptical of being forced out of their routines by having to use unfamiliar software, where every misstep will be broadcast to the audience.

TECHNICIAN

For larger events, there are often dedicated technicians responsible for the execution; in charge of all the practicalities relating to A/V equipment, lighting and hardware. The technician will typically have the files of all the speakers and handle the switching between presentations, as well as backups in case of failure.

If there is no individual technician, these tasks fall on someone with less experience and confidence in the tasks, either the organizer, administrator or the individual speaker.

ARCHETYPES
PRESENTATION TYPES

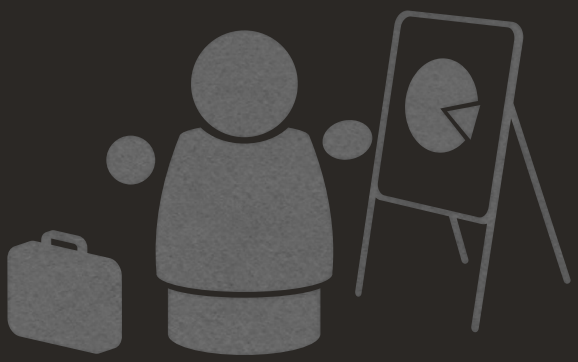


LECTURE

Lectures are longer sessions that are subject driven. The session will typically start by introducing a topic and explaining it progressively more in-depth. The goals are usually for the speaker to share some of his expertise on a given subject and for the audience to learn. Lectures as a presentation archetype do of course not have to be limited to education and classrooms, and are common in professional settings such as conferences and conventions, where the overall goal is knowledge transfer. Lectures are often more loosely scripted than other presentations and can be driven by feedback from the audience. Lectures are descriptive in nature and rely on facts and content to deliver the message.

INTERLUDE

Larger events often have a dedicated moderator whose job it is to bridge the various parts of the event. Typically this will include presenting the program, announcing speakers and keeping the audience engaged during breaks or delays. Often the moderator will interact briefly with presenters before and after their presentations, engaging in a dialogue and posing questions. The moderator rarely presents content of his own on-screen, but will have prepared brief notes about each of the other presentations.



PITCH

Pitches are very common in the entrepeneurial world. Typically the goal is to convince the audience in a short time, anywhere from 3 to 10 minutes. Pitches are usually rehearsed in detail and carefully edited and choreographed to have maximum impact and get as much information across within the given time constraints. The settings can often be quite formal and tense, where the two parts do not know each other beforehand. Pitches are often very one-directional without any audience interaction during the presentation. This is often followed by a session of questions or discussion afterwards.

STORY

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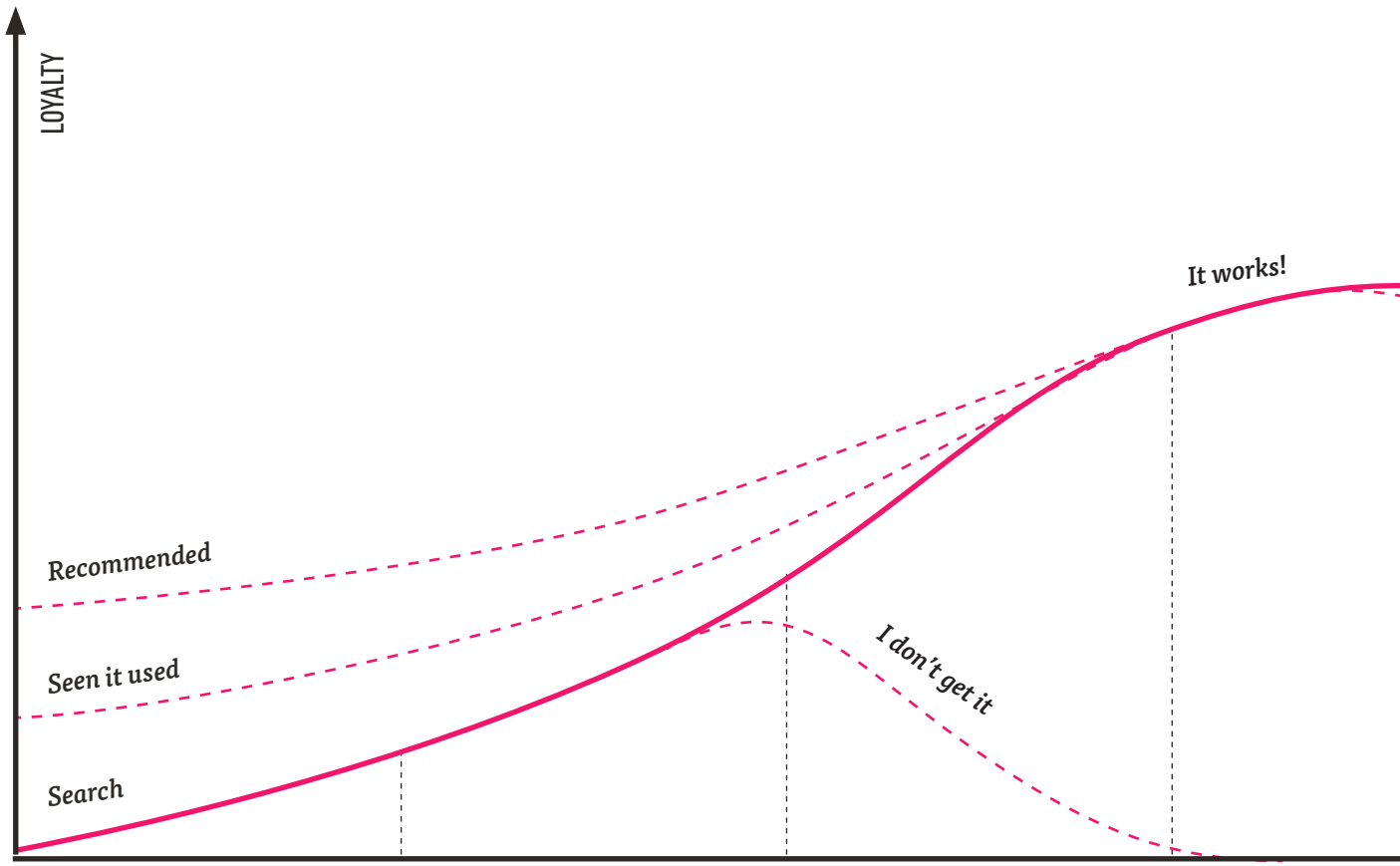
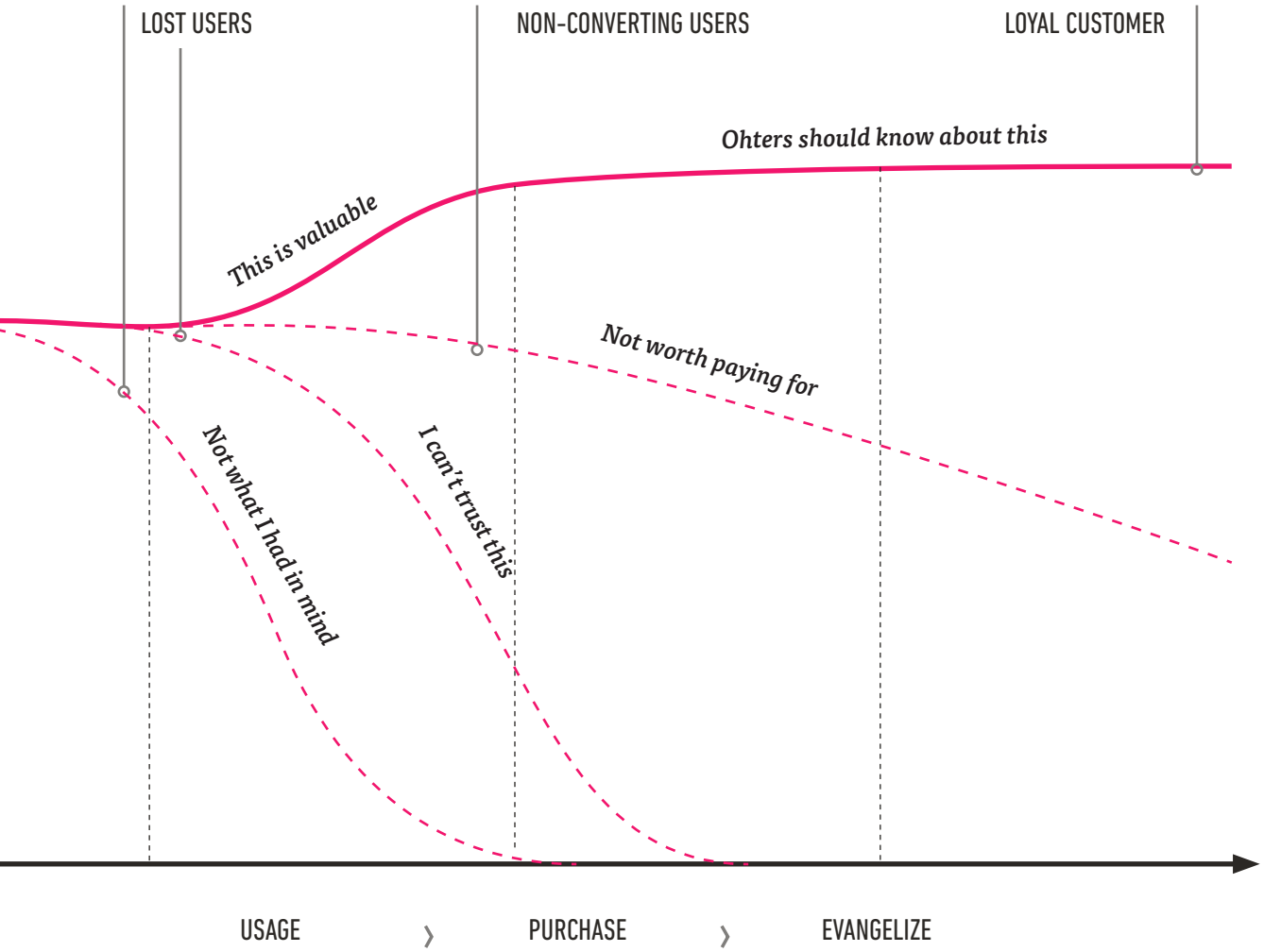
CUSTOMER LIFECYCLE



STAGES	FIND	CONSIDER	TRY
USER STATE	awareness of product & value proposition, awareness of personal need	considering alternatives, intrigued by product	willing to test it out, anticipation and uncertainty
GOALS OF SERVICE	be visible, engage interest	educate & seduce	convert interest to action, make conversion easy



learning, growing attachment or frustration	re-evaluating needs, regular usage	personally attached to product, wants to communicate benefits to others
excite and guide user, provide support	propose added value and convince user, listen to needs	build and reward loyalty, keep satisfaction, engage personally

EXPERIENCE
KEY POINTS

There are certain key points in the customer journey which can have a great impact on the user experience, and which are likely to shape the user's overall opinion of the product or service. These should be given extra attention when designing the experience and when observing users. The key experience points can bee seen as mental milestones, and often involve the user attempting new things and exposing himself to failure, thus creating insecurity. In the case of SlideDog, we identified the following three points.

OUT OF THE BOX

The out of the box experience is the sum of experiences the user has from committing to downloading the software to the first use of the product. The sum of these interactions make up the first impressions and will dictate whether the relationship becomes a lasting one or not.

Besides streamlining the steps needed to get the software up and running smoothly, it's important to put effort into designing the first interactions with the software itself. At this point, many users may not have a very clear idea about their own needs and the purpose of the product. Being greeted by a "blank slate"; an empty document, does nothing to resolve this or to guide the user along.

This last stage of the "out of the box" experience is an opportunity to allow the user to build confidence and make the learning process itself enjoyable.

FIRST LIVE USE

The road from testing out the product privately to actually using it for a live presentation requires a leap of faith from the user. The user needs to put a considerable amount of trust in the product before using it live, and this separates presentation software from most other programs which are used in a private setting.

The mental state of the user when presenting live is completely different, with focus removed from the software. There is much less room for error, and if anything should happen during the presentation, the blame is likely to fall on Slidedog.

In order to overcome this barrier, the user can gain confidence from seeing others use Slidedog live. Similarly, some kind of community feedback or testimonials page can provide confidence that the product does in fact work.

MOST LIKELY TO FAIL

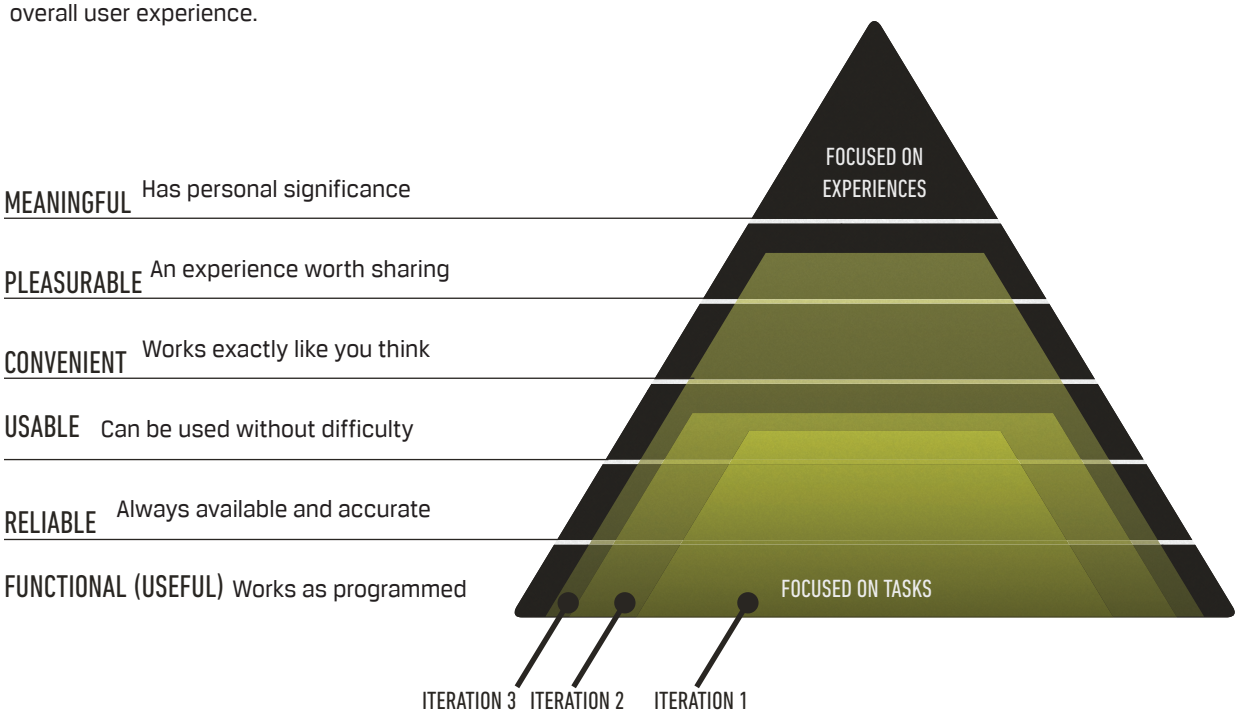
Determining when and how the product is most likely to fail allows preventive measures both to minimize the risks of these failures and their consequences.

One such moment that became evident through user observations was moving playlists between different computers, where the users have to copy all the files in the same folder structure in order to get things to work. This is not intuitive, nor is it explained through to the user.

A second possible failure moment is using Slidedog on new hardware, where the different file players are not installed. Even if these players are free and available for download, there may not be time to install these last-minute, and the process can cause a considerable amount of stress.

USER EXPERIENCE
GOALS

By adopting Stephen Anderson's model of a user experience hierarchy, we tried to frame the focus of the subsequent iterations to the interface. Through the first iteration we had brought the program to a level of basic usability, representative of our goals for the MVP. The focus on a new use context would mean that iteration 2 would have to expand the functionality of the program, but without sacrificing the user experience. For the final planned iteration, we wanted to avoid adding new functionality, but instead lift the overall user experience.



ITERATION 1

First version of the public beta aims to build a base around the core functionality. This is attempted lifted to a level where users can experience the product "as intended" and provide feedback on the usability. The functionality implemented still remains only a part of the intended finished product.

ITERATION 2

The focus lies mainly on expanding the functionality. The usability of the core is lifted on the basis of user feedback, but at the same time the new levels of complexity add significant challenges in terms of perceived ease of use.

ITERATION 3

The final iteration aims to lift the overall level of the level of the user experience of the established functionality significantly. The attention to detail and degree of polish is much higher, as the goal is to bring the entire prodct to a point where it is pleasurable and memorable to use.

10

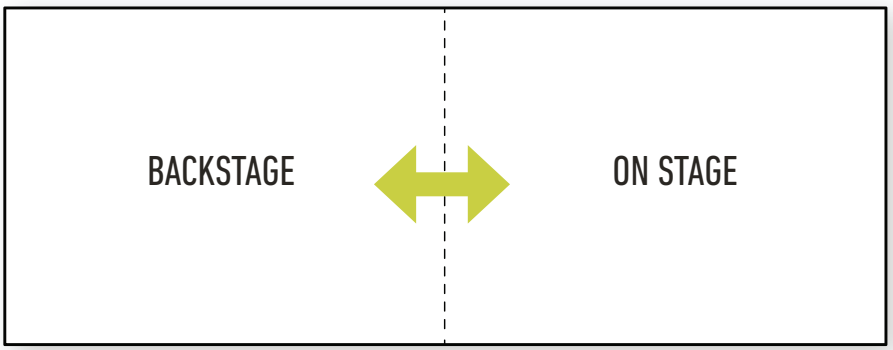
INTERFACE STRUCTURE

In order to fill the needs of the identified target users, the functionality of the product had to be expanded to include ways to organize and manage multiple presentations within Slidedog. This prompted some fundamental changes to the structure of the interface over the second iteration.

A significant amount of time was spent wireframing and sketching out different ways to structure the interface around this new functionality, as we wanted to minimize the perceived complexity. In order to achieve this, the layout not only had to make sense from a functional point of view, but also in terms of communicating a consistent mental model to the user.

This phase was also a process of laying a groundwork that would give room for future scalability. At this point we were realizing that Slidedog was heading in the direction of a platform technology, away from being just a standalone application. We saw clear benefits of adding new touchpoints in the future, such as a web interface for managing events, or even combining the functionalities of Slidedog and Preseria Conference in a single service.

MENTAL MODELS
THE STAGE



The interface is built around the concept of the stage and backstage views.

The introduction of the event level of hierarchy forced a rethinking of the information architecture. A large number of layouts were explored, generally dividing the interface into into a separate planner view and a presenter view.

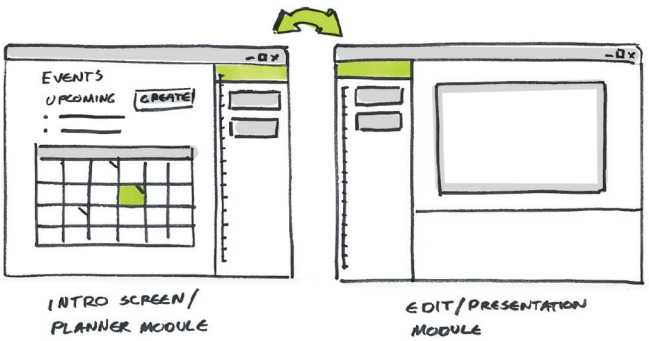
We first tried to organize the events in a time-centric manner along strict timelines or calendars. This proved both challenging to implement and inflexible in practical use.

An alternative direction was developed through the introduction of the of the stage and backstage as defining metaphors.

These two views still correspond with a planner and a presenter focus, but with content and not minutes as the primary parameter. As this mental model was explored further, it reavealed some interesting interactions.

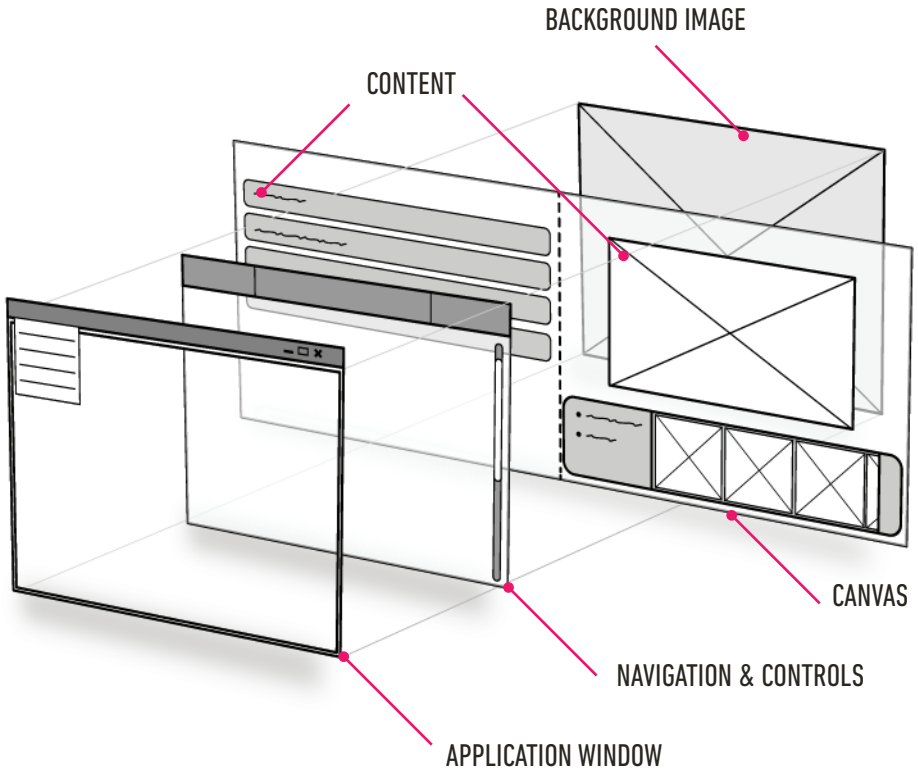
Content can be moved between the backstage and the stage, and it's location defines the possible interactions. For instance the playlist has to be brought on stage in order to present it to an audience, while it's only possible to rearrange the order of presentations backstage.

This concept of the stage and backstage divison became the basis for further refinement to the information architecture.



Early concept of a time-centered layout with a calendar, timeline and presentation hierarchy. This locked users in a planner mindset and provided little flexibility for loosely organized events.

MENTAL MODELS
INTERFACE LAYERS



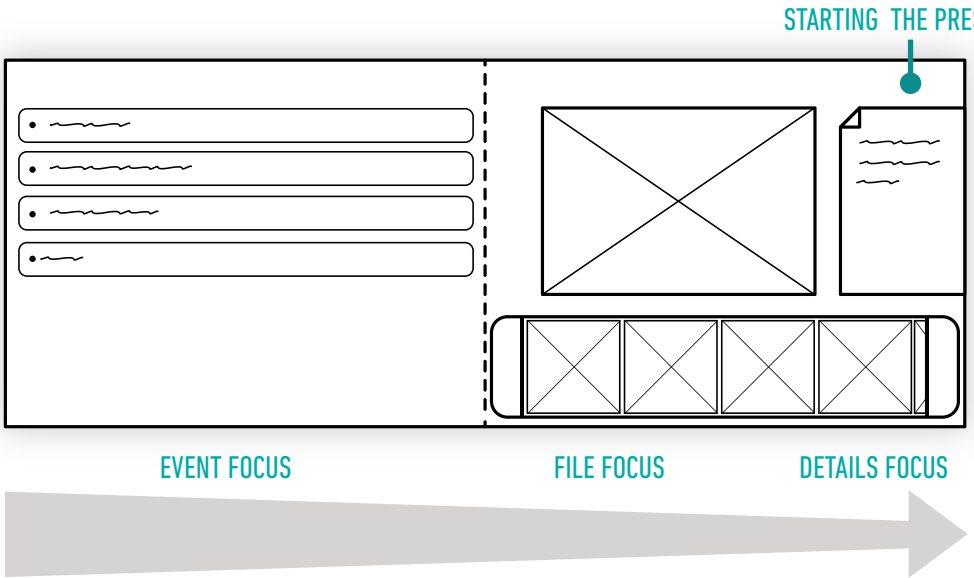
The application aims for a flat structure that avoids deep hierarchies. This means that the different interface elements are spatially related rather than through parent-children relationships. This can ease user orientation, and help build mental models that are relatable to real-world concepts.

All of the media related and user editable content belong on the canvas, which is organized into the backstage and stage views. The mental image of the canvas is a flat surface that is larger than the the actual application window, so that only one half of it is visible at a given time. Navigation consequently becomes a movement of the canvas left or right.

In addition there are two layers that are permanently visible on top of the canvas. One layer holds the the toolbar with navigation controls and application status, while the top layer represents the application window itself along with the main menus.

We also tried exploring the notion of a bottom layer to hold the background image for the show, along the same lines as the desktop background of the operating system. This was later dropped in favor of treating the background in the same manner as slides.

WORKFLOWS
DIRECTING THE USER



Left to right hierarchy that creates sense of directionality in the interface and reflects the normal use sequence .

The structural changes to the interface help underpin an intended workflow. This is in essence three steps; arranging/scheduling, preparing/rehearsing and presenting. These three user tasks reflect the main states of the interface, with the Stage and Backstage modules, and the Live state.

Navigation is centered around a left/right hierarchy, where moving right equates to an inreasingly zoomed in perspective. The suggested flow then starts at the left, defining the show and progessively moves right to the individual presentation, to the "Go live" button starting the presentation at the very right.

We decided not to force this workflow on the users however. This sequence works well for organizers running events, but less so for individual presenters. Even though the states are designed to be as straightforward and simple as possible, they still increase the overall complexity of the program. Gratification is delayed, and for users who only want to throw their files together quickly and start presenting, this extra step might be enough to dissuade them from using SlideDog.

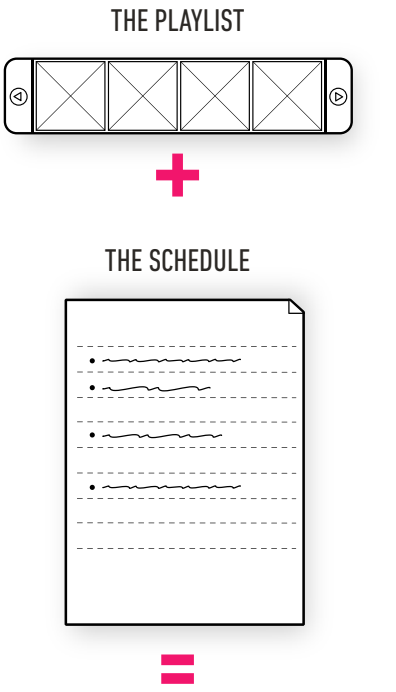
In order to accomodate this, the start-up screen for Slidedog was redesigned to let the user entry into the workflow at two different points. When opening the program, the user is now given the choice to Create a new event, taking him backstage, or to Start presenting which takes him directly to the playlist and preview. This way individual presentations can be made without ever seeing the backstage.

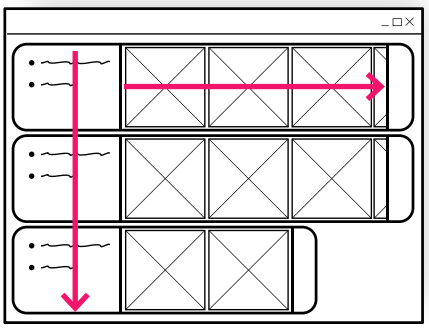
MENTAL MODELS
BACKSTAGE LAYOUT

The organizing principles of the backstage mode are motivated by the combination of two familiar interaction models; the playlist and the schedule.

The backstage mode serves two main purposes; to give an overview of the show in it's entirety, and to provide control over the metadata and sequencing of the different presentations. The latter is currently usually done manually, by entering the information about time, speakers and subjects in a list or spreadsheet to create the schedule document.

The solution was to make the playlist a container for this metadata as well as for presentation files. Arranging multiple of these playlists backstage would then give an immediate and complete overview of the show.





Progression of the show from top to bottom and progression of a presentation left to right.

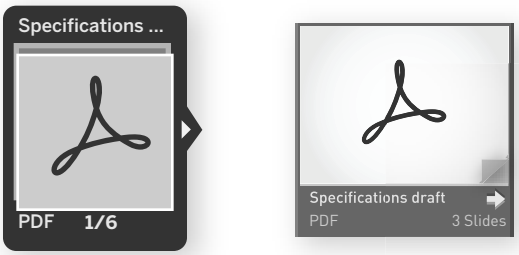
MENTAL MODELS
FILES

REPRESENTING FILES IN SLIDEDOG

Representing files in an intuitive manner in Slidedog was an important step in communicating the purpose of the program. Files behave differently in Slidedog than in their native applications or in a file browser, and their representations in Slidedog had to invite the right types of interactions.

It was also important to communicate that no matter what a user did to a file in Slidedog, the original would remain unaffected.

The representations of files stayed within the same mental models and interaction patterns in both iterations. For the second iteration the concept was somewhat abstracted, from a rather literal card depiction to a square tile-based layout in the second interaction. This was found to be a more effective layout for displaying both thumbnails and file metadata.



Representations of files in the first and second iterations. The fuctionality and interaction models are still similar, but with different layouts.

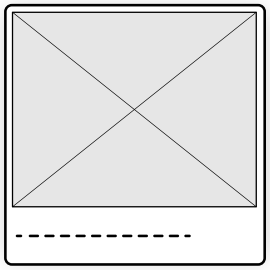
THE CARD METAPHOR

Files were represented as cards in the first version. The idea was to reflect the files in SlideDog much in the same way as note cards are often by presenters. The metaphor could then extend to stacks of cards for files with multiple slides and decks of cards for entire reflections. The

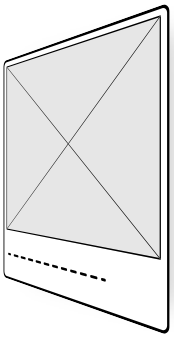
Working with the metaphor of physical slides or cards to represent files affords some intuitive behavior to the program, but the metaphor also creates some limitations. Not only does the same metaphor have to represent several, sometimes fundamentally different file formats, but it also lacks analogue equivalents to more advanced behaviors such as scaling.

Instead of trying to force the behavior of the application to fit with the metaphor, the second iteration applied a looser and more pragmatic translation of the concept.

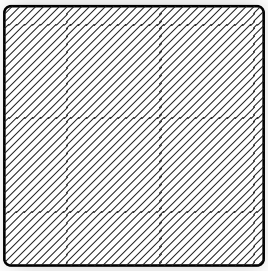
The key features that have to fit within the framework are still more or less the same, but some new features are introduced as well.



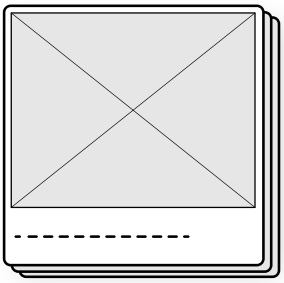
Cards can be both containers and describe the content.



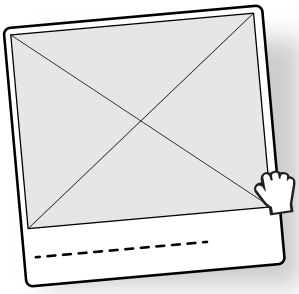
Cards can be flipped to hide the contents



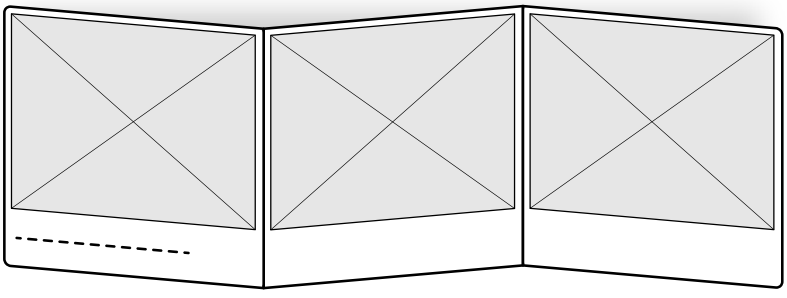
Front and back sides can allow for different types of interactions



Cards can be grouped into stacks

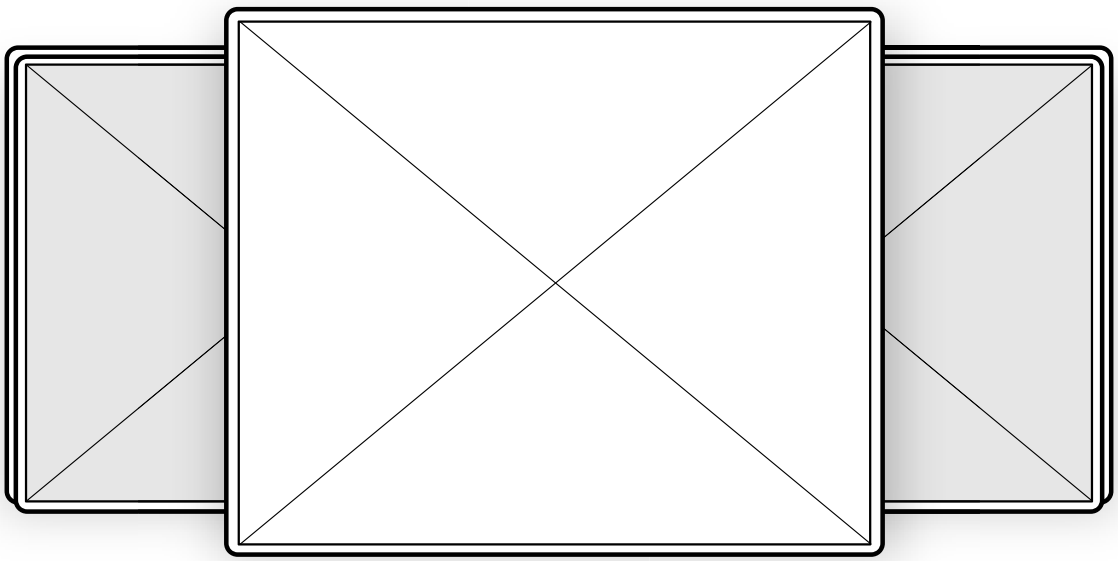


Cards afford movement and manipulation.



Cards be linked together and expanded or collapsed.

MENTAL MODELS
SEQUENCING



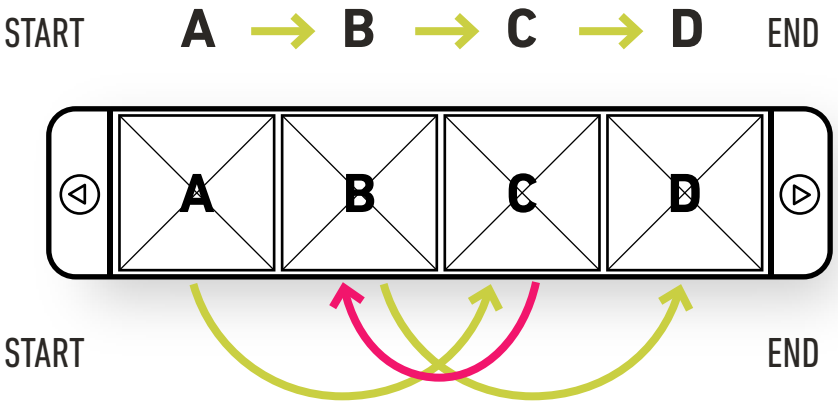
Shown slides & files *Current slide or file* *Upcoming slides & files*

The card metaphor was expanded as a way not only to represent playlist files, but to display the preview content as well. By communicating the files in a presentation as three changing stacks, the presenter is given a visual overview of the progress as well as a natural means of navigating through the presentation.

Clicking in on one of the previous or upcoming stacks, will change the slide. In a normal sequence each slide moves right to left before ending up in the "discarded" pile. This arrangement gives the user immediate visual feedback on what's next, allowing him to plan his actions accordingly.

The three stacks in total make up the entire sequence of files for a presentation and size of each stack can reflect the current progression. When starting a presentation, the left stack will be empty, growing as the presentation progresses until there are no more cards to draw from in the right stack.

LINEARITY



Presentations are traditionally linear and sequential; moving in a set order through the given content. For old analogue projectors and slideshows this linearity was given by hardware constraints, and the model has been perpetuated by Powerpoint and its widespread use. Given the new tools and new hardware platforms being made available, it seems likely that new alternatives to this paradigm will change, or at least be accompanied by less linear approaches.

Since SlideDog is not intended for content creation it will still depend on whatever tools the presenter chooses to use. It does however allow a greater freedom in the way content is presented. Even though the content is laid out in the playlist in a sequential manner which defines the default progression, the presenter can choose to take any number of paths through his files.

This raises certain issues that have to be addressed by the interface design. There are now two different progressions through any given presentation; one corresponding to the order of files in the playlist and one corresponding to the order in which they were displayed to the audience. Presentations are overwhelmingly controlled by two buttons, previous and next, either through the GUI , keyboard or a clicker. The notions of "previous" and "next" are no longer unambiguous with the two different paths present. Although next will always represent the upcoming file or slide given by the playlist order, "back" can both refer to the playlist and to the last viewed slide.

Because SlideDog depends on other programs for playback, there is little room to decide how keyboard or clicker input is handled. What can however be influenced is how this is displayed in the GUI.

INTERACTION PRINCIPLES

Interface elements designed to invite interactions.

How long until tablets are the presentation platforms of choice?

RESPONSIVE DESIGN

The second iteration placed a much higher emphasis on making the program's behavior more responsive and dynamic.

We wanted to create a user experience where working with the program itself reflects the values Slidedog aims to create for presenters being quick, flexible, seamless and easy.

The goal was to imbue the program this personality, encouraging a positive user state of mind, and building user confidence through interacting with the program. The challenge was finding the right balance between responsiveness and immediacy on one hand, and predictability.

The current design steers quite far in the responsive/dynamic direction. This was a conscious choice, and in essence a challenge to beta users. It's always easy to make the interface more conservative at a later stage.

DIRECT INTERACTIONS

SlideDog should create an environment for rich interactions, where the user can manipulate different parts of the interface directly. Rather than using menus or buttons and relying on abstract associations, the design of the interface elements should reveal the possible interactions.

Of course there are degrees of directness from completely separating user input and information display, to proximity of input and output, to direct contextual actions, to completely gestural interactions.

This means interactions are decentralized and belong to their respective parts rather than to a common dashboard or control room. The tradeoffs are that you either end up with a great deal of repetition of graphical elements, or the interactions are made invisible to the user.

MOBILE FIRST

Many of the interaction principles in Slidedog coincide well with a mobile first approach. Both have to be designed for use in a range of non-controllable environments and both have to rationalize screen real estate.

The interaction patterns used often get their inspiration from app design paradigms. This includes for instance the top navigaton bar and transitions between the stage and backstage, as well as as the tiles and cards-based presentation of files.

The obvious added benefit of designing the desktop application with mobile interaction patterns in mind is that it provides a consistent experinece accross all platforms if mobile or web-based touchpoints are introduced at a later stage.

11

GRAPHIC GUIDELINES

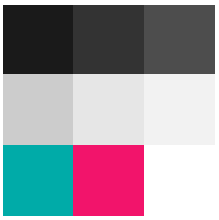
The nature of the lean design process is product and implementation focused, and it can sometimes induce tunnel vision. Working extensively on implementation meant spending a lot of time on the gritty details of pixels, object states, hex color codes, and in some cases the forest got lost amidst the trees.

During the later phases of implementation, this focus on efficient development turned less and less efficient. We were working through features sequentially, tackling one design element after another and facing a lot of the same decisions each time.

This motivated work on guidelines for the interface; defining common behaviors and appearances to help bring consistency across the interface. Equally important was their role in future development, where the achieving this consistency will become increasingly challenging as the number of touchpoints increases.

These guidelines are a work in progress, representing the current best practices for the interface. These are entities that evolve along with SlideDog, and as the product matures, they should be refined and expanded in a separate guidelines document. This should encompass not only graphical aspects, but also behavior and structure.

COLORS



PALETTE

The color scheme is based around the use of greytones for the main elements of the interface, highlighted by a distinct accent and signature color.

This overall color scheme is chosen to enhance the media content rather than compete with it for attention. In addition the colors have to work well for elements in repetition and help bring a sense of rhythm.

Since the media content in Slidedog is very much user defined, the surrounding interface has to be flexible enough to handle this. A large portion of the content will however be either black on white, common for documents and slideshows, or white on black: commonly seen in movies and many presentation templates. This motivated the use of a midtone grey scheme for playlists, ensuring that the media and container are distinguishable to the user.

SIGNATURE COLOR

The signature color in the interface is the same teal as is used in the Slidedog logo and identity. The color has a fresh and somewhat synthetic feel, fitting for a digital product. It can convey a range of moods, from professional to whimsical to upbeat depending on how it's applied.

The signature color is chosen partially to distinguish SlideDog from other brands. It's also a consciously odd choice for an identity whose logo is a dog, where the color discord helps abstract the identity. This keeps the identity from being too cartoony or gimmicky, and the unusual combination can be beneficial for recognition.

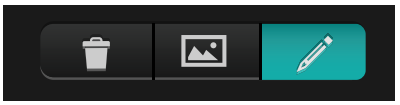
The color has an advantage of reproducing fairly accurately on screen, and maintaining its character both through lighter shades and darker tints.

It is a color that works well against both light and dark backdrops. Against light backgrounds it takes on a more stable and calming character, while it becomes more lively and action-oriented on a dark background. The contrast is reduced when paired with midtone greys and should be avoided

ACCENT COLOR

Magenta is used as an accent color. It is a vibrant color that draws the eye and provides a very strong contrast against any greytone.

The accent color should used sparingly and only where the user's attention is truly demanded; even in small doses it will become a visual focal point.



APPLICATION

The signature and accent colors play complimentary roles in Slidedog.

Throughout the interface, the teal color has an affirmative role. It is used to highlight areas of interaction such as buttons, the selected states of objects, and it is used to indicate what is live when presenting.

Magenta plays the complimentary role as a warning sign. It is typically used for alerts or to inform the user of potential negative consequences to an action, such as deleting a file or stopping the presentation.

VISUAL FEEDBACK

All the buttons in the interface share the same feedback state, defined by a green inverse gradient. This creates a strong visual focal point that can help the user in terms of orientation, as a means of wayfinding for the mouse cursor.

Keeping the feedback consistent for all elements with the same purpose is also important to give the interface a sense of predictability.

The main colors can also be applied as gradients for clickable elements. These represent only subtle color shifts.

TYPOGRAPHPY

DIN PRO REGULAR

abcdefghijklmnopqrstuvwxyzæøå
ABCDEFGHIJKLMNOPQRSTUVWXYZÆØÅ
0123456789 !&?()

DIN PRO MEDIUM

abcdefghijklmnopqrstuvwxyzæøå
ABCDEFGHIJKLMNOPQRSTUVWXYZÆØÅ
0123456789 !&?()

DIN PRO BOLD

abcdefghijklmnopqrstuvwxyzæøå
ABCDEFGHIJKLMNOPQRSTUVWXYZÆØÅ
0123456789 !&?()

TYPEFACE

The font DIN Pro is chosen as the main typeface for the application. It is a compact sans serif font originally developed for signage systems for the German institute of standardization, based on geometric shapes and with a technical character.

The typeface is chosen because it works well to represent information in a neutral and slightly sober but affirmative fashion. In an information rich interface such as SlideDog, it implies trustworthyness without being obtrusive. The typeface also has a compact x-size making it efficient for screen limitations of text feels. Legibility is maintained even at small font sizes.

AaBbCc

ICONS

ICONOGRAPHY

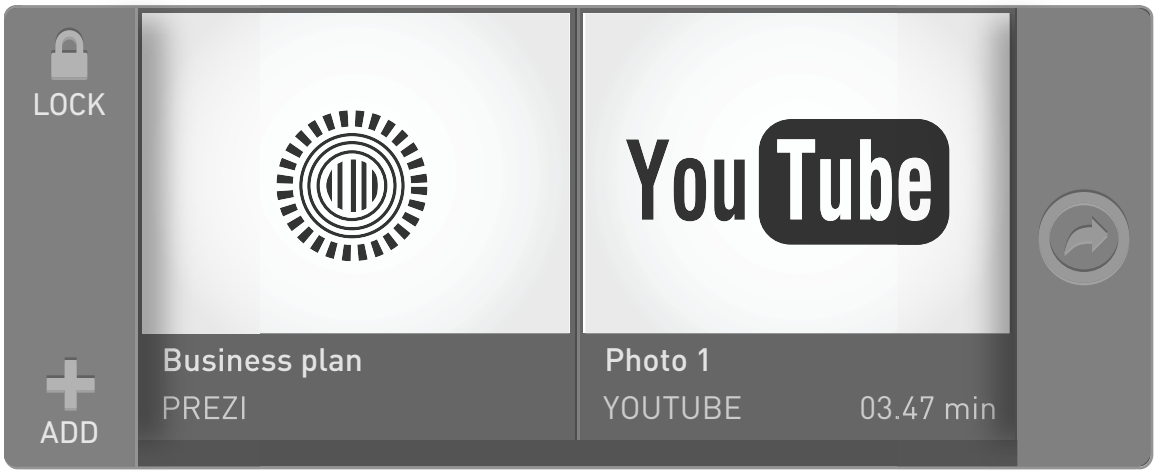
Iconography is kept as simple and to the point as possible with the use of monochrome outlines. Their purpose in the interface is to provide information, not decoration.

Icons are mainly used for buttons where they indicate the available actions, appearing but are in some cases used as labels alongside interactive elements such as text input fields.

The main advantages of using graphic icons are their space efficiency, freeing up more area for the display of content, and the fact that they are language independent. They are however not unambigous, so their use should be reserved for describing concepts that are familiar to the user.

A sample of the icons used in the interface. Each icon generally only has two of the three display states shown here.

CONTRAST



Principles of least effective difference as applied to the playlist. There are several noticable shades of grey that separate the different elements, yet the playlist appears as a cohesive whole.

PRINCIPLES

Conscious use of contrast is an important measure towards reducing the perceived complexity of the interface. The overall philosophy is in line with the ideas of "Least effective difference" coined by Edward Tufte.

The greytones used in the interface elements themselves are never pure black or pure white. This allows slight room at either end of the spectrum for subtle highlights or shadows.

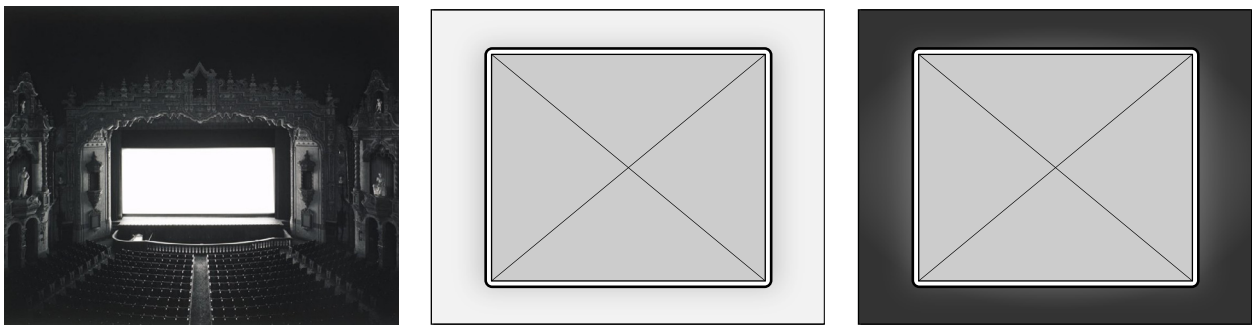
Keeping the overall contrast low for most interface elements allows the user's attention to be directed where needed. This is used to put focus on the content itself, and ensuring that both slides on white and black background, as well as color photos stand out from the rest of the interface. The use of greytones is also a way to ensure that active or marked elements, which are highlighted in green, stand out effectively and provide the user with a means of orientation.

APPLICATION

The main rule of thumb when applying contrast is the 10% rule. In order to distinguish two neighbouring elements, their color values should differ by about 10%, such as a 50% grey next to a 40% grey. This will generally ensure that the difference is visible, even on low gamut monitors, without being visually disruptive.

This rule can for instance be applied to strokes and borders vs the background elements, or to the start and endpoints of colored gradients.

BACKGROUND



Using light and dark backgrounds as the main state indicator of the interface. Starting a presentation mimics the feeling of turning the lights out at the theatre before the show starts.

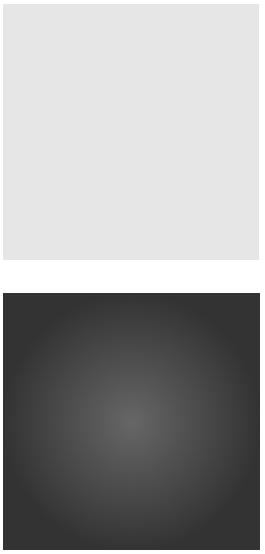
ABOUT

The interface has to clearly communicate the state of being "live" or not to the user. The two states represent different user mindsets and different goals, which Slidedog should reflect both visually and functionally.

This is communicated through changing the background and color scheme. The goal is to build up a mental image familiar from the real world of using projectors. Before the show starts the room is illuminated, with the canvas just a part of the room. Starting the show, the lights are dimmed and canvas illuminated, immersing the audience in the contents on scree.

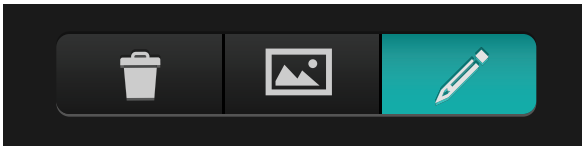
This same experience is communicated through Slidedog. When in edit mode (not live), the background is a light grey, placing about the same emphasis on different parts of the interface. It's aim is to give the user the sense of a blank canvas that can be populated with content and manipulated.

Starting a presentation (going live) dims the background to a dark grey, increasing contrast on the preview window and making this a clear center of attention.

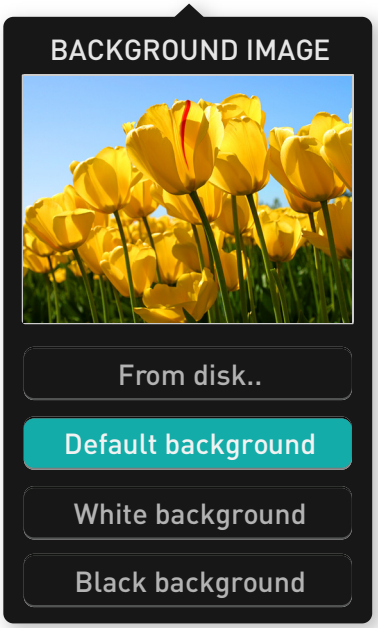


The background colors use to distinguish preview and live states.

VISUAL DEPTH



Buttons are slightly modeled through the use of gradients, giving the appearance of popping out in their default state, and slightly depressed when marked with teh cursor.



Popup-menus cast a slight shadow to communicate them floating over the rest of the interface.

The interface is structured around a mental model where elements are geometrically related on a flat canvas. The interface is in this sense "flat", as there are few levels of hierarchy. Still, different elements have different relations to this canvas and different behaviours that have to be communicated visually.

Details are used to bring a sense of volume and depth to the elements. These should always be used subtly and not represent a focal point in themselves, but rather accentuate whatever behavior the element is communicating.

The main way to bring depth to the elements is a bevel effect. This indicates that an element is slightly recessed into its surface, such as dividing lines looking like they're etched into the surface rather than drawn on top, and icons looking like they're stamped. The bevel effect is created by adding a subtle highlight to the bottom and a shadow to the top of the element, 1px in size. The tonal gradations are 10% lighter and darker than the original color.

A second element used to create a sensation of depth are drop shadows. These are mainly used for elements that are "floating", such as when dragging a file between playlists. These elements are perceived as floating flat above their neighbors, whereas the effect is used slightly differently for the preview window. In this case the shadows are cast instead directly below so as to appear resting on a stage and illuminated by spotlights above. A third use of shadows are within scrollable fields, where the edges cast shadows so as to look like "tunnels" that content flow into and out of.

TERMINOLOGY

As far as possible, the terminology used in Slidedog is human and non-technical. We attempted to equate the different concepts in the interface with real-world information, so that they would correspond with users' "knowledge in the world".

Several terms were used in the first public beta version which users found hard to grasp. For example playlist, which is a very familiar concept in software terms, was not intuitively understandable when dealing with presentations.

ON STAGE & BACKSTAGE

~~PRESENTER VIEW & ORGANIZER VIEW~~

Rather than referring to different views in the program, these concepts are replaced by notions of physical places; the stage and backstage. These terms make orientation easier, and they better describe the content and actions that belong to each.

This creates some intutive understanding of a workflow, such as having to bring the presentation files on stage before presenting them, or making behind the scenes changes backstage without them being revealed to the audience.

REMOTE

The presenter's app is simply called the Slidedog remote. Even though this is underselling the app somewhat, it gives the user a very clear image of the core functionality which is a way of remote controlling presentations by switching files.

PRESENTATION

~~PLAYLIST~~

The playlist was replaced with the concept of a presentation. Playlist caused some ambiguity with users who strongly associated the word with music players. Presentation as a concept is a richer term that also included real-world characteristics such as an author, a location and duration instead of being just a collection of files.

BREAK

The natural continuation of working with different presentations in Slidedog, is the concept of a break. From a functional point of view, breaks aren't truly necessary as they only reflect a time slot without any presentations to show. They do however create a more intuitive way of conceptualizing shows as a continuous series of presentations and shows, rather than a series of presentations interspersed by "nothing"

SHOW

~~EVENT / SESSION~~

The collection of presentations and breaks is called a show. It's a positively charged terms that can help inspire user confidence in the program's ability to "put on a show". The term event was originally used, but it lacks the same energy and is already associated strongly with Facebook.

LIVE

~~START~~

Rather than starting presentations, the user now untertakes an action of "going live". This reflects a global state change in the program, of actually transmitting/displaying content to the audience. The term also sets the right expectations for the behavior of the program when it's not live, giving the user confidence that he can interact without every action being broadcasted.

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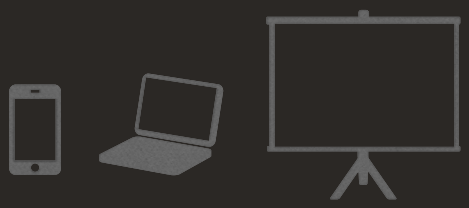
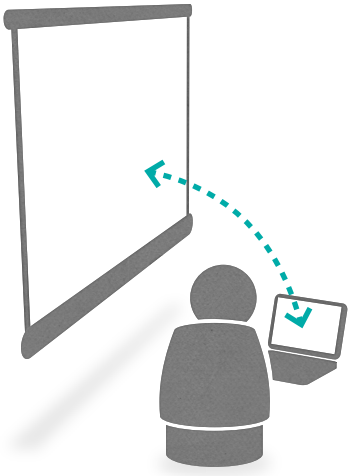
PHYSICAL FRAMEWORK



Presentations depend on a coordinated effort from both hardware and software, making the context somewhat unique. The range of hardware configurations and input devices used for presentations all add to the complexity and variability of the physical framework. This means the software has to be designed for flexibility and scalabilty.

Some of the aspects of this system are presented here as well as the ways that Slidedog adresses them. Adaptation for use with dual screens and different with different input devices were given particular attention.

DESIGNING FOR DUAL SCREENS



How can the user be given knowledge of what's on the second screen without having to turn away from the audience?

Designing the interface for use on dual screens creates several usability challenges. Unique to the use context in presentations is that only one of the screens will usually be visible to the presenter, and the second to the audience. Much of the usage prior to presenting may also be done in a single-monitor environment.

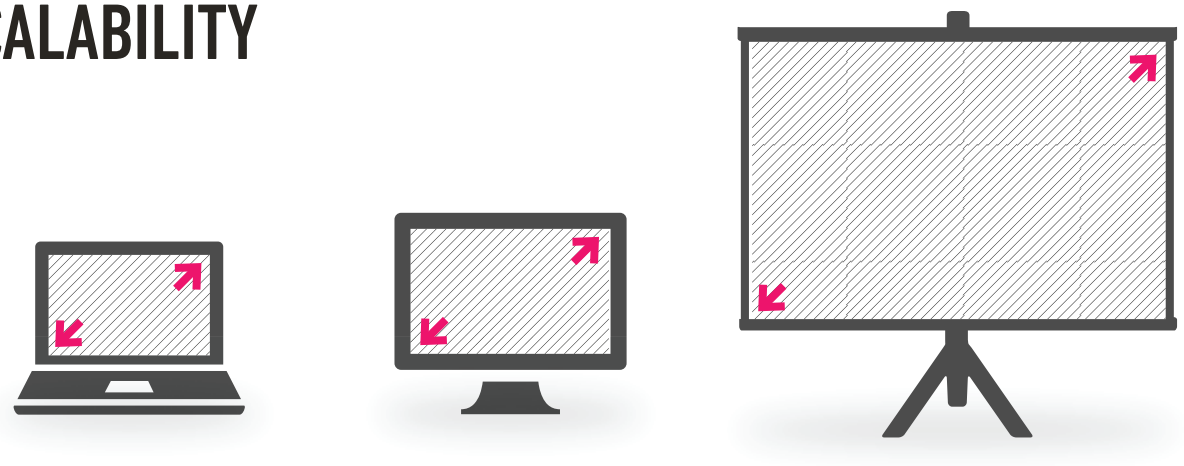
Slidedog's approach in this context is to always show just presentation playback on the second monitor, while providing the presenter with a richer interface on the primary monitor.

In a straightforward presentation setting, this will work well: the audience sees just the file the presenter intends, while the presenter himself has access to information that provides foresight and overview.

However, the interface has to allow a user to predict how a presentation will turn out working from home without a projector, and it has to allow the freedom to make changes without showing the audience. This might for example be making last-minute changes to a presentation in the auditorium, or checking the upcoming schedule while presenting.

A third issue is to provide sufficient error prevention. Accidentally showing the wrong slide or file has a much higher impact on live presentations than most settings, so these tasks have to have a certain built-in threshold.

SCALABILITY



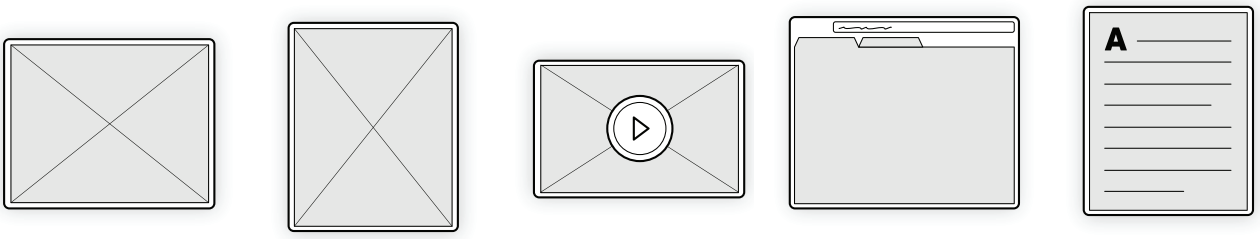
Both the Slidedog interface and presentation output has to work for a range of of physical screen sizes, viewing distances, resolutions and aspect ratios.

The use context of presentation software is complex, and the design has to account for a lot of variables which are outside of the designer's direct control.

The application has to be scalable both in terms of the range of hardware used, and in terms of the various different types of files it supports. These parameters should ideally be fluid and user definable, but this dynamic resizing is demanding to implement. Certain compromises have been made in order to adapt the interface to a majority of use conditions.

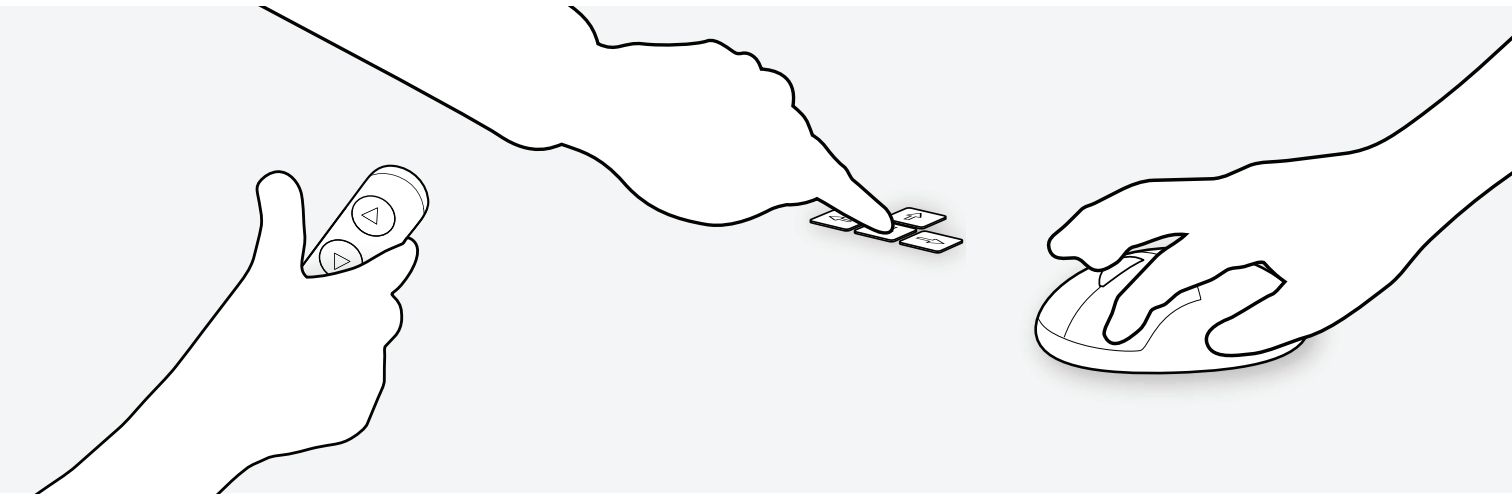
The app window currently only has two states; default size and maximized. The default size is scaled to fit on 1024x600px displays, which allows the program to run even on older netbook displays. The minimum resolution is however limiting in terms of the amount of detail that can be shown at a given time.

The playlists, file thumbnails, buttons and menus all have a static size, while the preview screen and notes panel scale dynamically. These elements are given the highest screen priority, as they contain the most crucial information for presenters.



Files vary both in size, proportions and their ideal viewing conditions.

INPUT DEVICES
CONTROLLING PRESENTATIONS



CLICKER

Clickers, at their core, are a wireless device with two buttons (although some are more advanced). These two buttons are mapped to the PAGE-UP and PAGE-DOWN keys on the keyboard, meaning that pressing forwards on the clicker does exactly the same thing as pressing PAGE-DOWN on your keyboard.

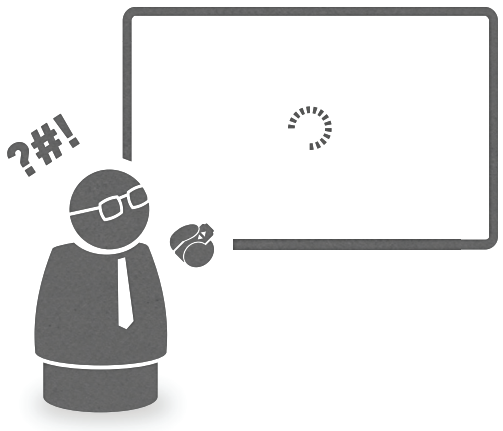
KEYBOARD

Slide-based programs such as PowerPoint and PDF Reader have very generous redundancies in their presenter states. They provide numerous ways of accomplishing their main tasks, namely changing slides. For instance changing to the next slide in Adobe Reader can be done by hitting either space, enter, right arrow, down arrow or page down, meaning that users familiar with these programs can have developed a number of different habits. Of course, these inputs are not consistent across all applications, and will be significantly different for both movies and web pages. This provides a considerable challenge when trying to ensure consistency across all file types in the interface

MOUSE

Mice or trackpads are also commonly used to control slideshows, and much like clickers its usually the mice buttons and not the cursor position that control applications. This is type of direct control is hard to accommodate within SlideDog, not only because of the different file types, but also because the mouse cursor is needed to interact with the SlideDog GUI itself. With the loss of mouse conventions for the individual programs, it's all the more important that the presenter part of the interface is simple enough to pick up for users used to other conventions, giving clear indicators and generous affordances, requiring little cursor movement and low precision during the presentation.

INTERACTIONS
REMOTE CONTROL



Many features of presentations can be remote controlled, either via a clicker or the SlideDog remote app. This frees users from interacting directly with the GUI, but often times the presenter will still have eye contact with the screen, either to see the slides or notes. Other times a technician or organizer will have the screen in front of them to control the presentation.

In both of these cases there is potential for a great deal of confusion. Presenters with clickers will often be insecure of whether the device is orking or the batteries are dead if the program doesn't respond immediately. Technicians viewing the interface have the ability to override input from the presenter, which can be confusing for both parties.

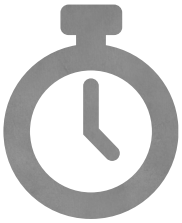
The one measure to resolve this is to visually distinguish the two forms of input in the GUI. The user can then see on the screen which source the input came from, and presenters with remotes or clickers can see that their input registered. These visual cues should be more prominent than regular feedback, because they will typically be displayed while the user is some distance away from the screen.

TIMEKEEPING
ALTERNATIVES

Many presentations have trouble staying within their alotted time and the delays accumulate over the course of a longer session. Often times presenters try to get through their content even if it means rushing through some parts of the presentation or skipping things toward the end, and degrading the overall user experience

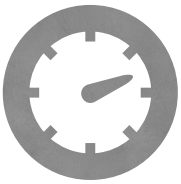
CLOCK

Many longer presentations are defined by their start and end times instead of the duration. This particularly applies to lectures which have regular schedules and lengths, often with a break in the middle. In these cases it might be more important to stop the presentation at the right time and avoid causing delays for the audience than to get through every bit of content. Having a clock showing the current time causes the least amount of cognitive load for the presenter, even though clocks are usually already present in the auditorium/classroom.



STOPWATCH

Stopwatches are commonly used for presentations and already a part of applications like Powerpoint and Keynote. The time starts when the presentation starts, showing very directly how much time the presenter has spent. The downsides to this is that they rarely indicate when the alotted time is used up, and thus give the presenter few indications to speed up or stop. In many cases, a presenter will have a given amount of time at his disposal, but this time actually starts running when he enters the stage and may be quite a bit ahead of what time the stopwatch is showing.



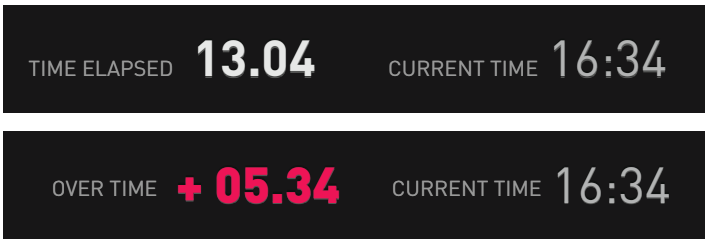
TIMER

Timers count down from a predefined time until it reaches zero. For many presentations, especially shorter ones, this is probably the most relevant piece of information for the presenter. It allows him to frame his progress as "How do I get through the remaining content in this given time?" rather than having to mentally translate "I have gotten through X content in Y time, how am I doing?" in the case of a stopwatch. The downside is that focusing on time remaining can be seen as more stressful to the presenter on stage.

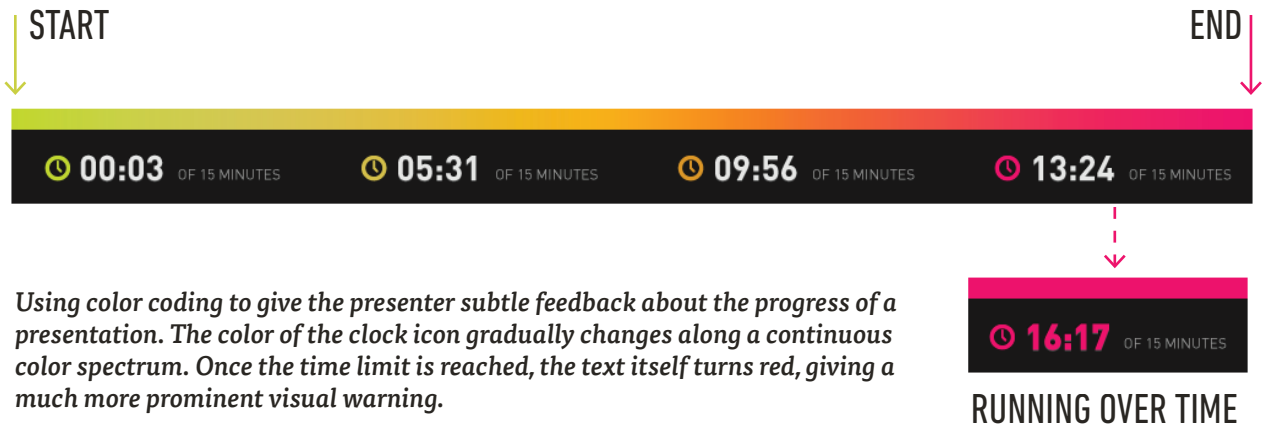
TIMEKEEPING IMPLEMENTATION

The most effective combination of time management tools for presenters were found to be the displaying both a stopwatch and a regular clock on-screen. Most presentations are defined by either one of these two parameters from a for instance a strict 7 minute pitch, to a lecture lasting until whenever the bell rings.

Timers may be effective pace-keeping tools, but they provide nothing unless the presenter has manually entered a duration. For low-threshold use which Slidedog aims to accomodate, the passive stopwatch and timer tools were found to be more effective.



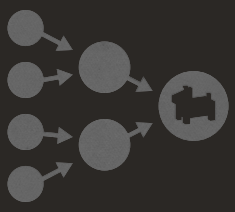
The chosen time-keeping tools for Slidedog, with explicit labelling of the two displays. The stopwatch function is designed to provide extra benefit when a duration is entered for the even. When a presentation reaches its time limit, the time resets to zero and starts counting over-time, increasing both urgency and visiblity.



Using color coding to give the presenter subtle feedback about the progress of a presentation. The color of the clock icon gradually changes along a continuous color spectrum. Once the time limit is reached, the text itself turns red, giving a much more prominent visual warning.

13

CONCEPT DEVELOPMENT

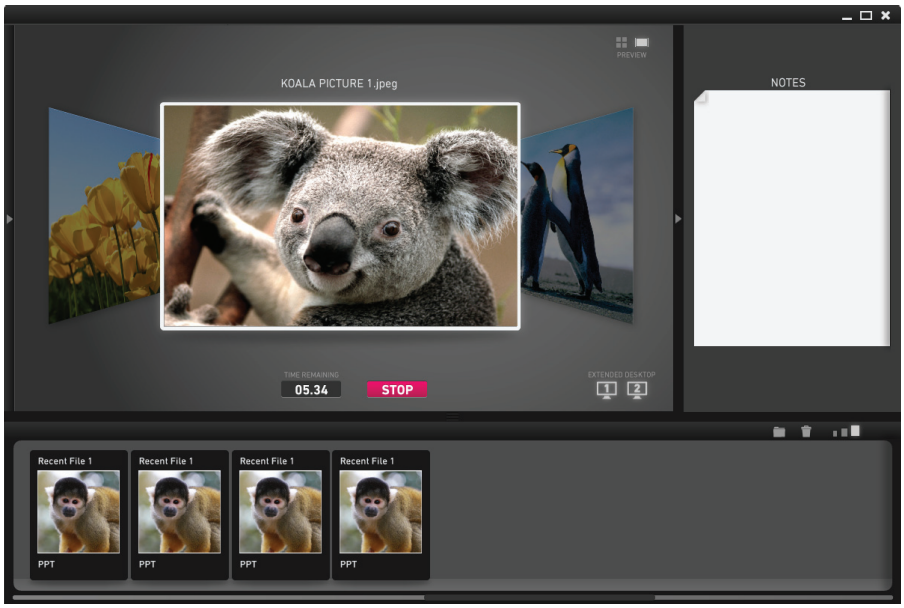


Development and tweaking on the second iteration continued up until the very end of the project, driven in part by some some late redesign of the backstage view.

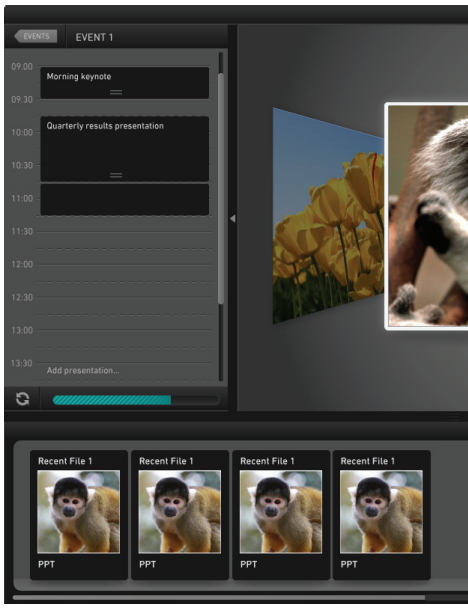
The orginal project plan was for three full iterations, with the the last one focusing on refinement and tweaking. These last two iterations effectively merged into one, encompassing both the structural changes and the user experience polish. The obvious disadvantage to the double build cycle, is that we have missed opportunities to test the product and get user feedback.

This design phase encompassed all of the work described earlier in terms of structuring information, graphics guidelines, etc, a lot of which was refined in parallel. It started with an extensive period of paper sketching and wireframing before moving onto detailing. This detailing and implementation phase lasted rougly the last month of the thesis work, and saw much of the interface being rebuilt from scratch. The main two design directions are presented here, as well as some of the late changes that impacted the final result.

PROPOSAL 1
MODULAR & TIME-FOCUSED



Presenter view with notes



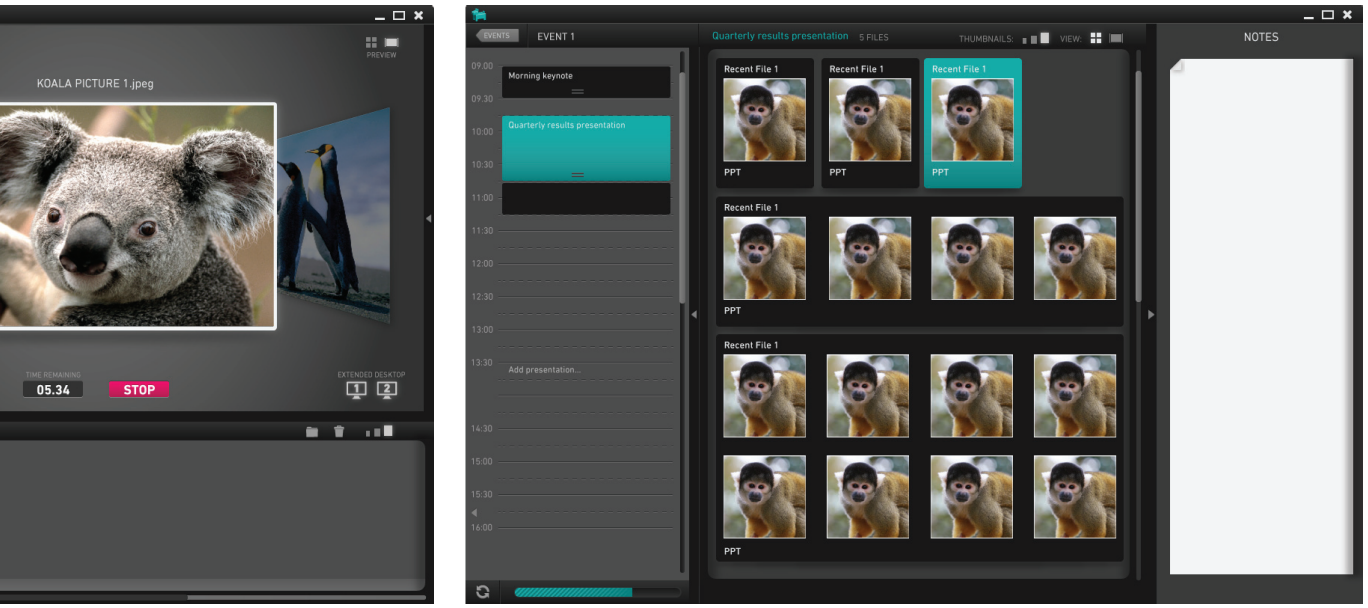
Presenter view with schedule

The first concept explored ways to include multiple presenters in Slidedog through the introduction of a vertical timeline. Each presentation is shown on the timeline with their duration corresponding to the size of the element, analogous to online calendars and planners.

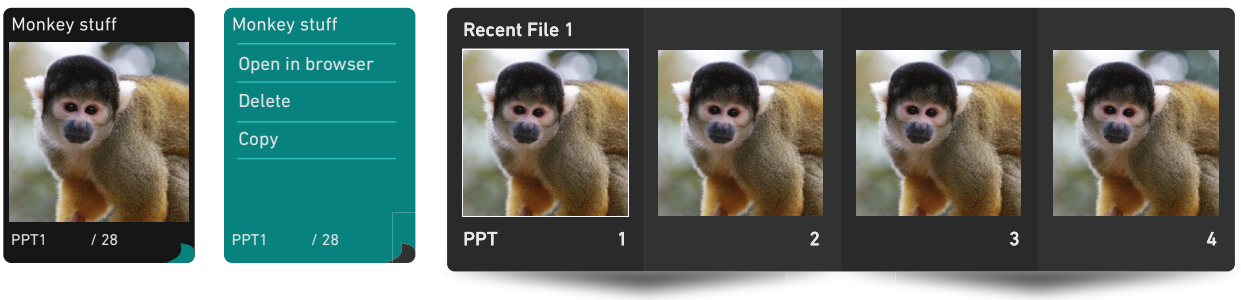
The concept also aimed to accomodate user feedback for more flexibility and file control by modularizing the interface elements. Different functionality is placed within panels that are expandable and collapsible, allowing a greater degree of flexibilty in use.

The introduction of a grid view also allows overview of a presentation on the slide level and not just the file level, giving much better control over long Powerpoints.

Implementation of the chronological timeline with scalable and movable presentations proved particularly challenging and time-consuming to realize. This prompted further exploration of alternative ways to arrange presentations, away from strictly time-based ones.



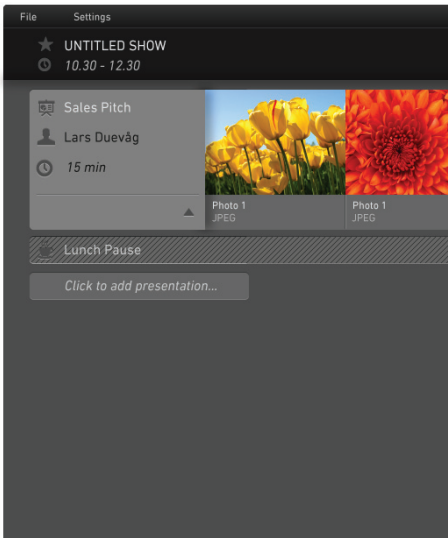
Grid view showing every slide and file in a presentation simultaneously.



Exploring the applications of the card metaphor to represent files.

PROPOSAL 2
CONTENT & PLAYLIST-FOCUSED

Introduction of the backstage concept for creating and editing multiple presentations.



Breaks as tangible elements that can be

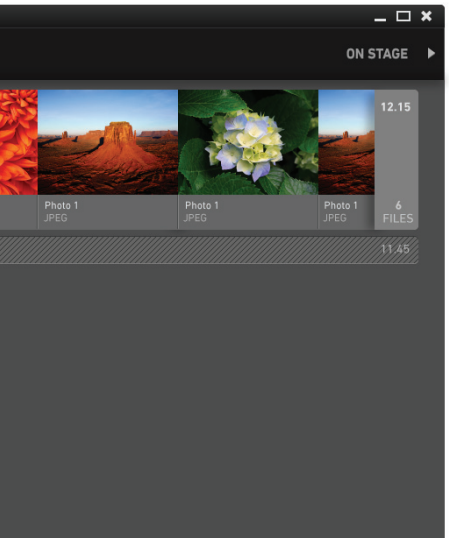
The alternative to a time-based interaction model of approaching multiple presentations was a content-based one. This proposal prioritizes the playlist as the central element in the interface, not just as a container for files, but as a subject for direct interaction and manipulation.

This approach prompted the restructuring of the interface around two central states, the previously discussed backstage and stage. The backstage allows for working with multiple playlists simultaneously, with their order reflecting the chronology of presentations in a show.

The second state represents the presenter view with the focus on a single playlist. The transition between the two states becomes the symbolic act of taking the files "on stage".

This interaction model is accomodating to a wider range of events and presentations. In more informal settings, or in solo presentations without strict schedules, being forced to deal with a timeline can become unnatural and burdensome.

This proposal represented the direction most in line with the intended use context for Slidedog, and was chosen for further development and subsequent iterations.



added between presentations.

Stage or presenter view, with a single playlist in focus.

Interaction proposals for a dynamically scaling playlist. When content is dragged onto the playlist it opens up, making room for the file and inviting the user action. The playlists physically grow and shrink as more content is added or subtracted, reflecting the length of the presentation.

The last phase of the design process was incremental and locally iterative in nature. Each thumbnail shown here represents a different artboard or working document, each one usually corresponding with a variation of a feature or a step in a use sequence. The topic of the work document was often the subject of implementation at the same time. The final implemented design would usually be the result of a large number of reworkings, adaptations and tweaks.

BACKSTAGE REDESIGN

MOTIVATION

With the second iteration nearly done in terms of implementation, we did some in-hose testing and internal evaluation of the program.

The backstage layout had stayed true to the idea of combining the schedule and playlist as a single element. As these are the constituent parts that make up a presentation in SlideDog, it makes sense to present them to the user as a single entitiy.

The resulting interface became quite cluttered however, especially working with any more than two or three presentations backstage. This prompted a last-minute rethinking of the concept and a subsequent redesign. The goals were to improve the visual clarity and overview backstage, and to improve scalability for larger shows.

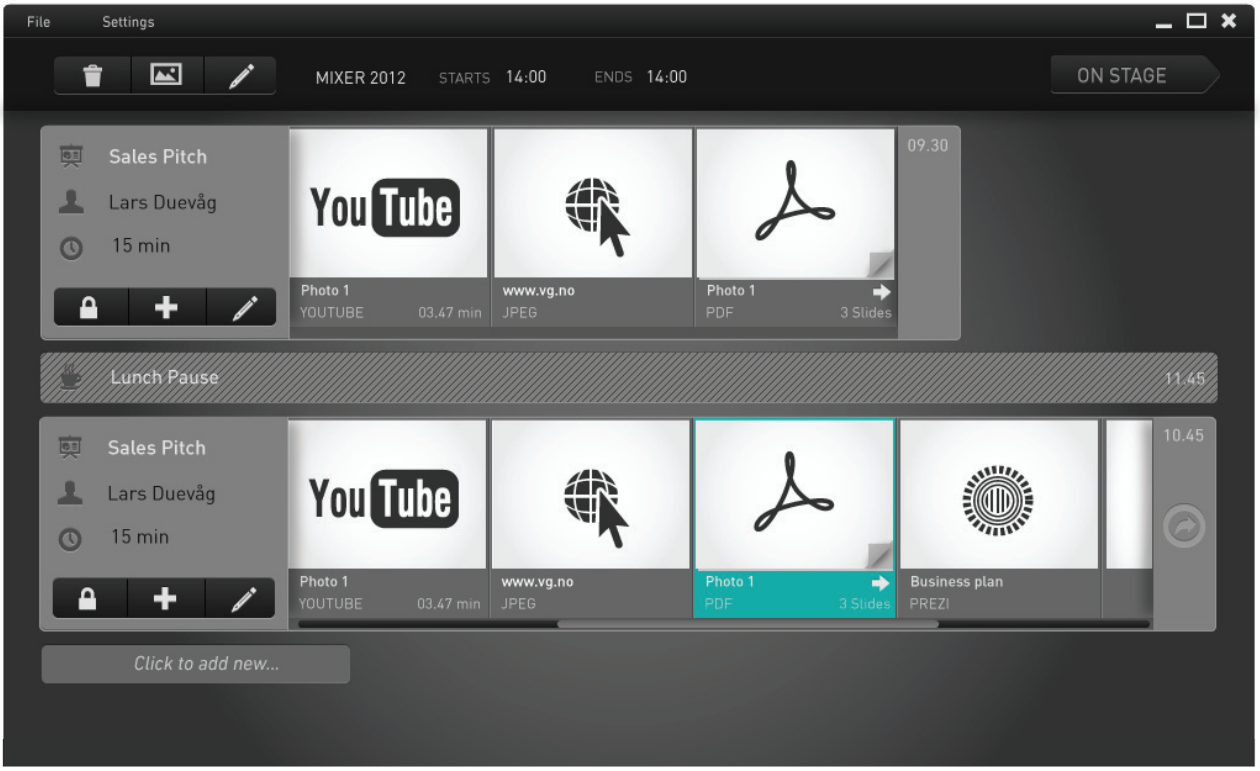
We also saw that displaying metadata as part of the playlist takes a significant amount of screen real estate, at the expense of showing files. For presenters this tradeoff is not necessarily a good one, certainly not for click-and-go presentations where you just want drag files into the program and show them without having to consider names or duration. The former solution was not a particularly scalable one, not for displaying a large events, and even more restricting once the functionality grows.

There are already plans to add the ability to invite presenters directly trough the GUI, more advanced playback controls, and likely several other features. Having these controls as a part of the playlist would add a lot of redundancy to the interface with these options showing for each of the presentations.

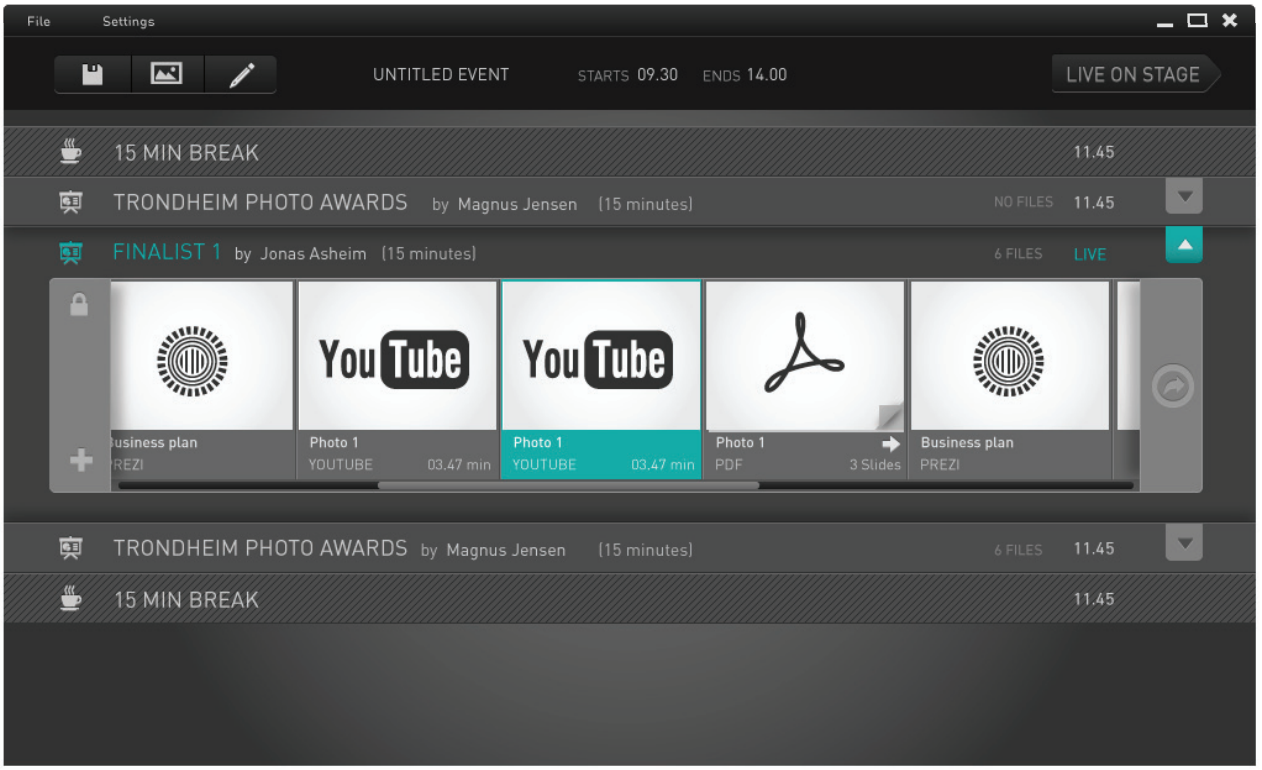
SOLUTION

The new design relocates all of the presentation metadata backstage, as part of a collapsible playlist container rather than the playlist itself. The primary value of this information is in relation to other presentations, to help sort and schedule events. The change allows the playlist itself to remain much more compact and single-purpose.

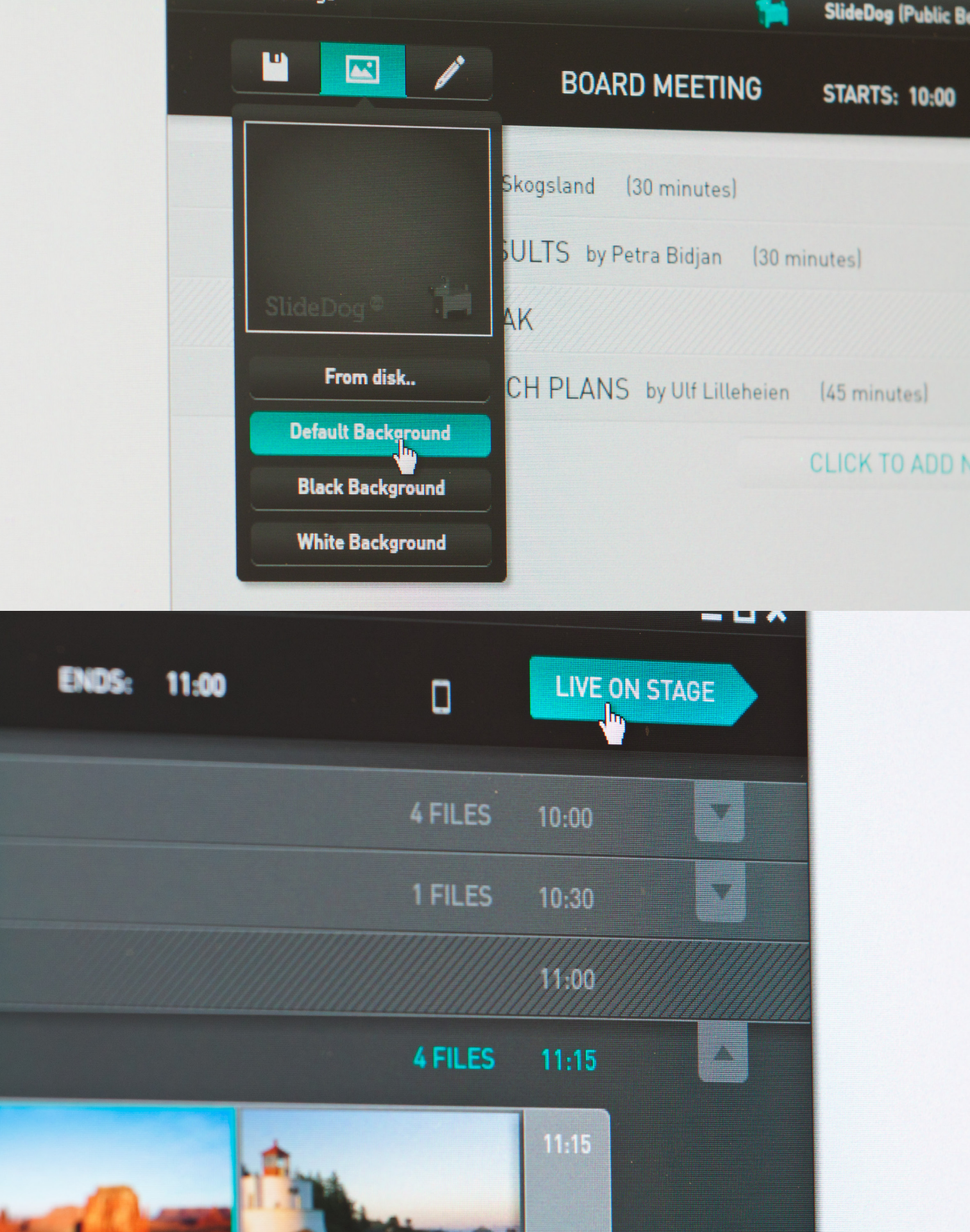
Presentations are now displayed in an accordion fashion, where only one playist can be visible at a time, creating a much stronger sense of focus. The new layout also allows presentations and breaks to share a similar appearance and behave in the same manner. When on stage, the name and duration of the presentation is relocated to the top toolbar.



Old backstage layout top and redesign below.

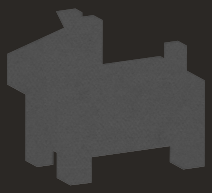


Working between the running Slidedog build and the design documents simultaneously gave design changes immediately tangible results.


SlideDog (Public
BOARD MEETING
STARTS: 10:00
Skogsland (30 minutes)
ULTS by Petra Bidjan (30 minutes)
AK
CH PLANS by Ulf Lilleheien (45 minutes)
CLICK TO ADD
SlideDog
From disk..
Default Background
Black Background
White Background
ENDS: 11:00
LIVE ON STAGE
4 FILES 10:00
1 FILES 10:30
11:00
4 FILES 11:15
11:15

14

FINAL DESIGN



At the time of writing, implementation is nearly up to par with the design intent, although there is some cleaning up to do in terms of bugs and performance.

The final product is described here in terms of the two main views, and through the main steps and states in a normal use cycle. Inevitably, not all the details can documented and explained on paper.

The program is best understood through actual hands on use, and a link to this latest version is provided in a separate document. For all intents and purposes, this version accurately reflects the final design.

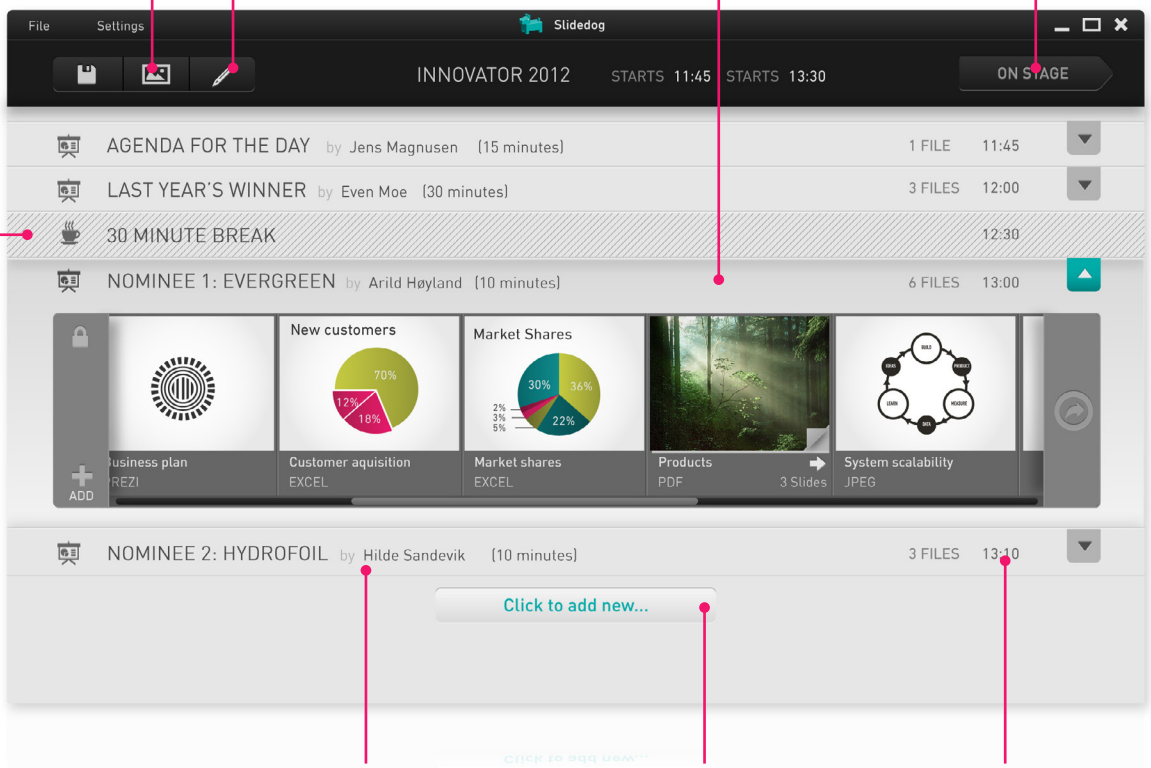
FINAL DESIGN
BACKSTAGE

Set a custom background for the show

Quickly edit all the details about speakers and times

Presentations expand to reveal the playlist with the presenter's files

Take the presentation on stage



Breaks can be added between the presentations

The order of speakers can be quickly changed by dragging a presentation

Adding more presentations or breaks to the show on the fly

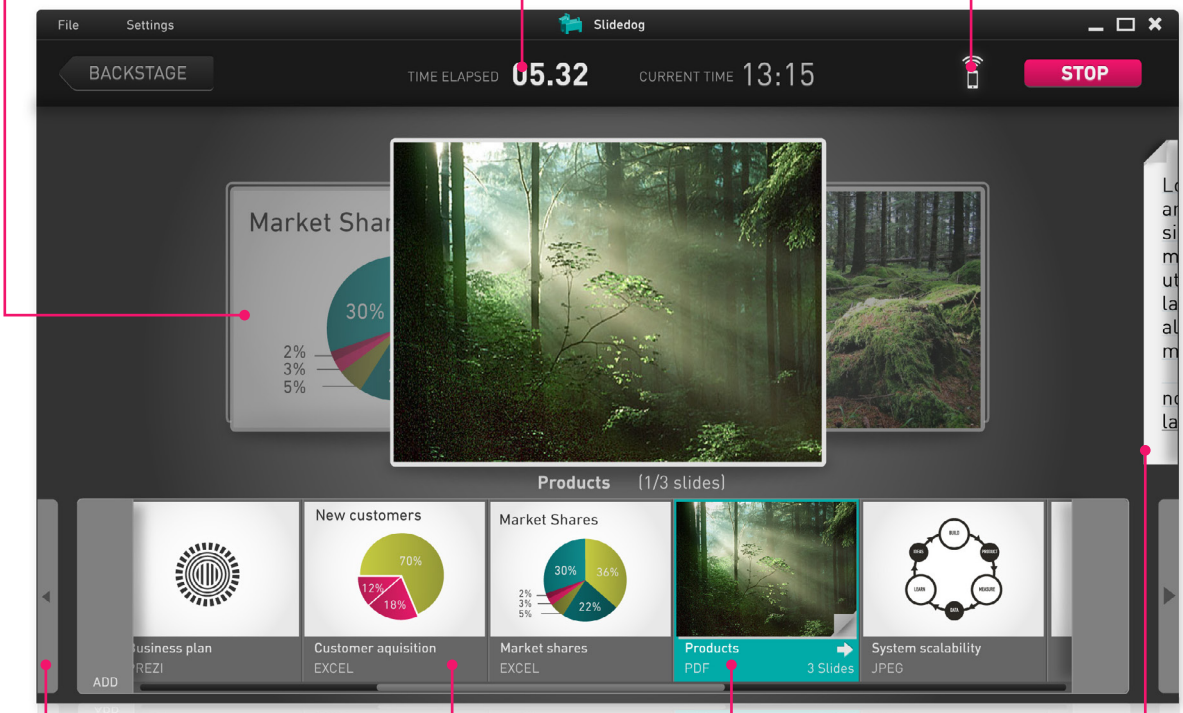
Slidedog automatically sets the starting time for each presentation based on their duration and order.

FINAL DESIGN
PRESENTING ON STAGE

Cover flow previews give you a visual overview so you never lose track of your place

Timer that warns you if you go over time

Control the presentation and view notes directly on your smartphone with the Slidedog Remote App



Changing to the previous or next presentation directly from the backstage view

Get an immediate visual overview of the presentation in the playlist.

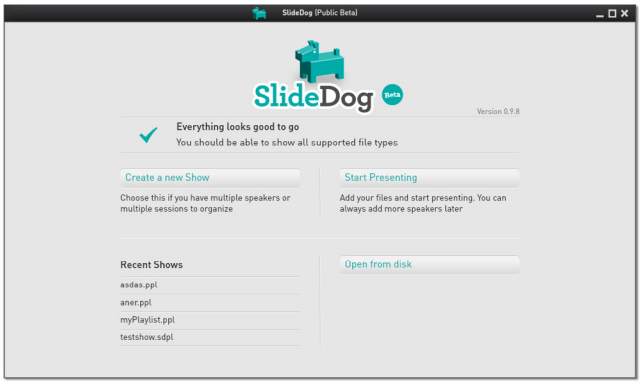
Current file or slide is clearly highlighted

Presenter's notes for Powerpoint files

USE SEQUENCE
WORKING BACKSTAGE

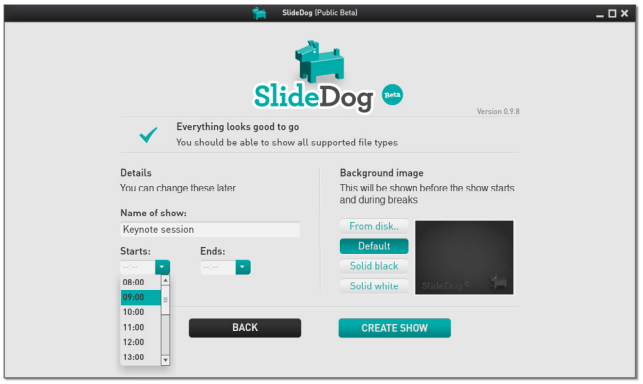
1 LAUNCHING SLIDEDOG

Introduction screen with status of the installed programs displayed at the top. If any programs are missing, a warning is given. The user is given the two main options to either create a new show or to start presenting, giving two different points of entry to the application.



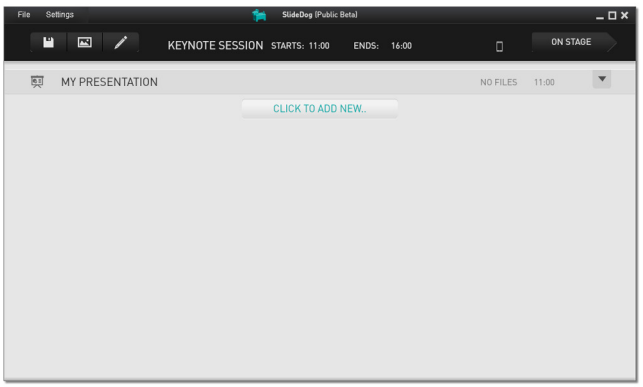
2 CREATING A NEW SHOW

Creating a new show gives the user the option to enter a name and time for the event. The option to set the background image is also explained and featured prominently in order to make this a more used and better understood feature.



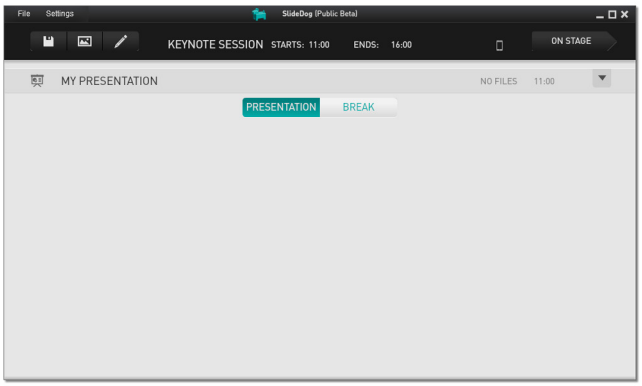
3 ENTRY BACKSTAGE

Clicking "create show" takes the user backstage, where the information entered for the show is displayed in the top toolbar. An empty presentation is created, with its starting point coinciding with the starting point for the show.



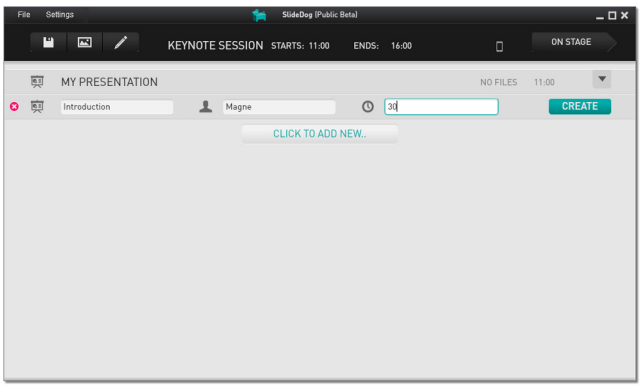
4 ADDING A PRESENTATION

Hovering over the button labeled "click to create new", gives the user the options of adding a new presentation or a break. This will be create a new slot at the end of the schedule.



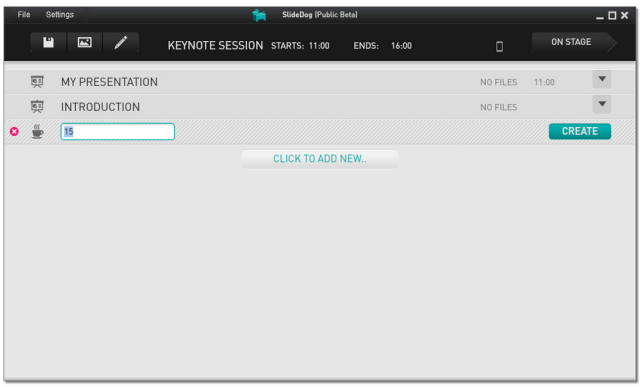
5 ENTERING METADATA

The new presentation can be given a title, and assigned a speaker and duration. After entering a duration, Slidedog will automatically display the starting time of the presentation.



6 ADDING A BREAK

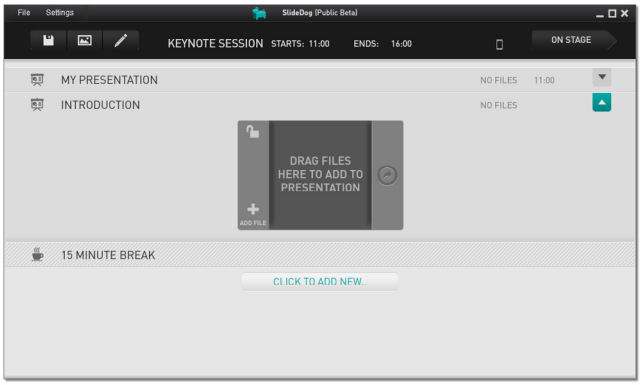
Breaks are presented as tangible parts of the show, along the same lines as presentations. Breaks have a greyed out stripe texture to distinguish them, and to indicate that they can't contain presentation files. The only value the user needs to designate to breaks are their duration.



USE SEQUENCE
WORKING BACKSTAGE

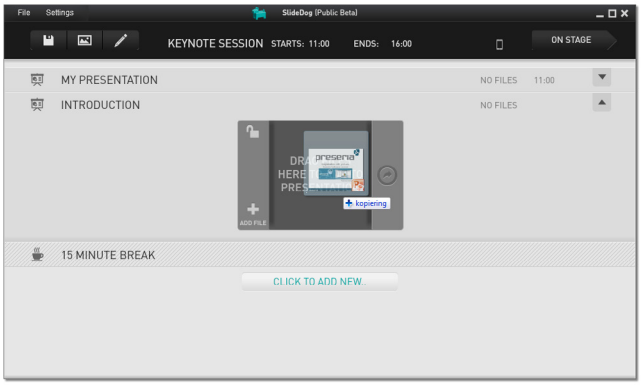
7 POPULATING THE PRESENTATION

Clicking on one of the presentations listed in the schedule will expand it in an accordion manner to reveal an empty playlist. The playlist has three actions associated with buttons; adding files, locking the playlist from further editing, and bringing the presentation on stage.



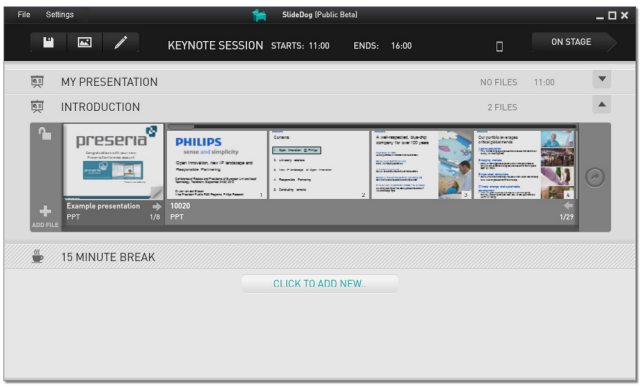
8 ADDING FILES

Files can be dragged and dropped into the playlist. If there is already content added, the playlist container will expand to make room for additional files.



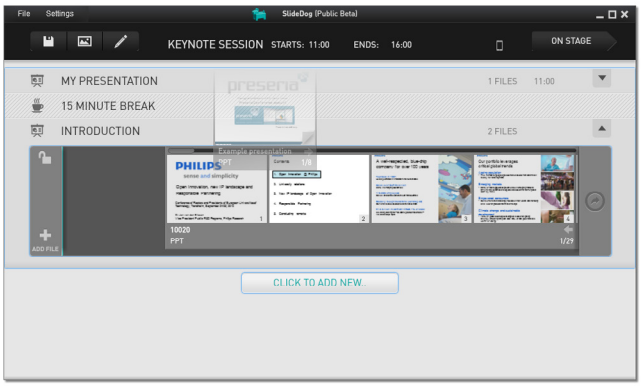
9 EXPANDED PLAYLIST

As more files are added, the playlist grows until its width reaches that of the application window. Files containing multiple slides or pages are indicated with a small corner tab, and can be expanded to show the individual slides.



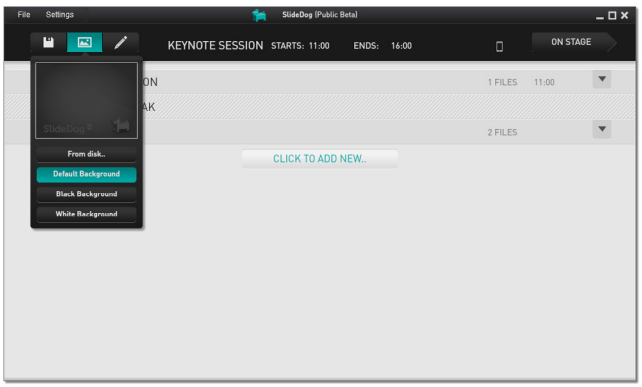
10 REORGANIZING PRESENTATIONS

Files can be rearranged within the playlist by dragging them, and they can be moved between different playlists directly by dragging and dropping.



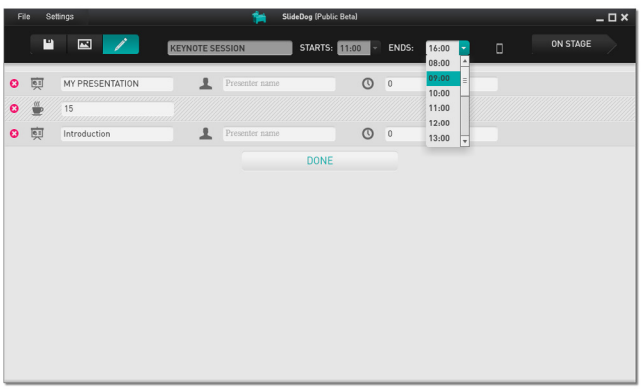
11 SETTING THE BACKGROUND

The background image can be changed directly from the top toolbar. Clicking the Background image icon opens a dropdown showing the current background, and the options to change to one of three presets or to select a custom image from the disk.



12 EDIT MODE

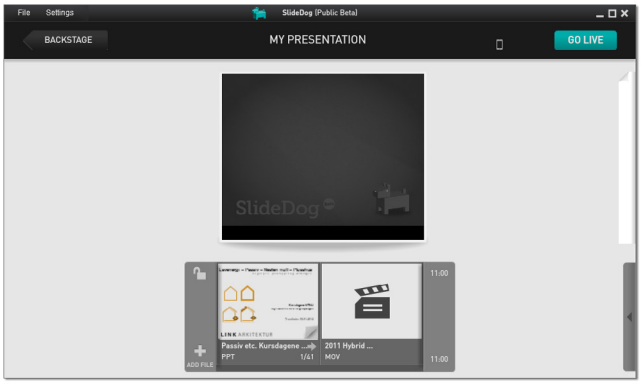
Clicking the edit button will activate a global edit mode for all the items backstage.
This allows any of the names, speakers or durations to be changed, and presentations or breaks can be deleted from the show.



USE SEQUENCE
PRESENTING ON STAGE

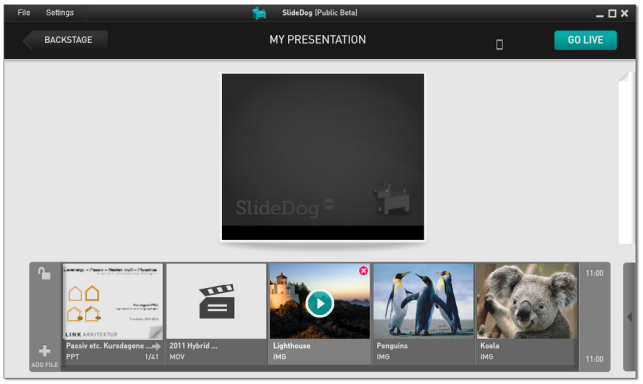
1 PRESENTATION ON STAGE

Taking the presentation on stage will display the selected playlist along with a preview window. The appearance and behavior of the playlist is consistent with the backstage view, while the name and duration of the presentation are displayed in the top toolbar. As long as no files are being previewed, the background image is shown in the preview window.



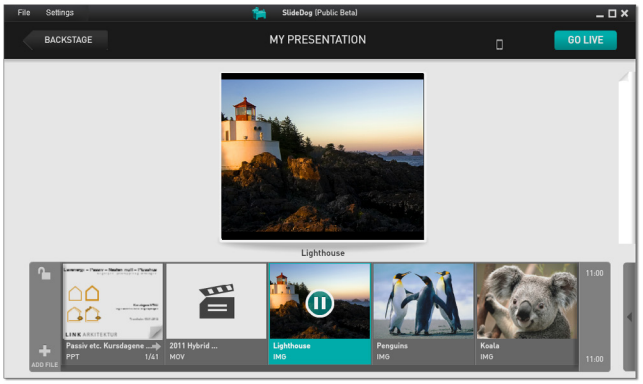
2 ADDING FILES

Files can be added and manipulated in the same manner as backstage, either by drag and drop, or by clicking the add file button. Hovering the cursor over a file in the playlist gives the thumbnail a subtle highlight, and reveals two contextual actions for the file: delete and preview.



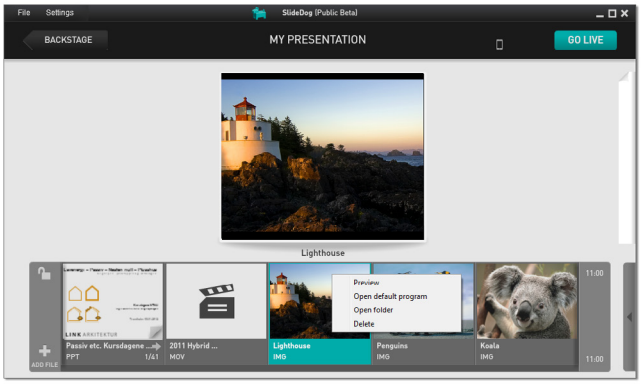
3 PREVIEWING FILES

Clicking the play icon will preview the file, showing it in high resolution on the primary monitor, while the background image remains on the projector screen. Pausing brings up the background image again.



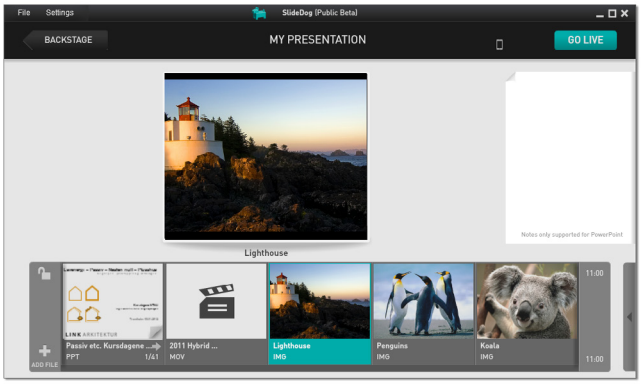
4 FILE OPTIONS

Right-clicking a file in the preview window brings up a context menu for the file, displaying options to preview, open with default program, open the containing folder, or to delete the file. This context menu is brought back to the default OS appearance and behavior on the basis of the findings from the usability test.



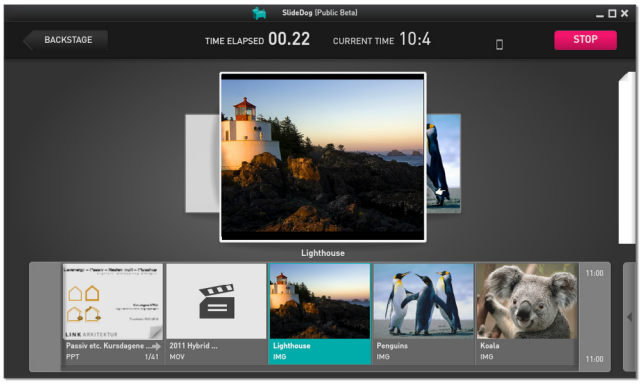
5 SHOWING NOTES

The notes panel can be expanded to show presenter's notes for a given slide, where the display size of the text can be changed. This is currently only supported for Powerpoint files.



6 GOING LIVE

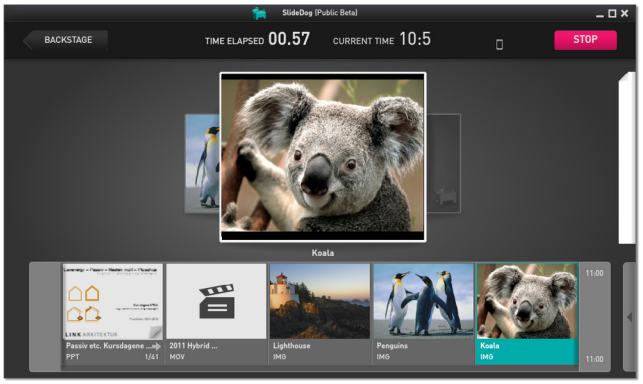
Clicking the "go live" button in the top right corner starts the presentation from the currently selected file. The interface is dimmed, and a timer is displayed in the top toolbar, showing time elapsed for the presentation and the current clock time. The currently showing file or slide is highlighted teal in the playlist.



USE SEQUENCE
PRESENTING ON STAGE

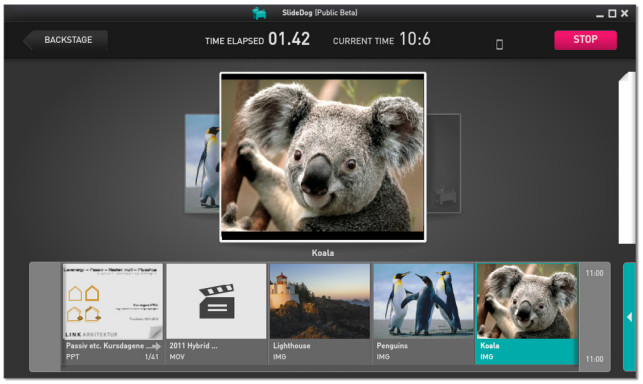
7 CHANGING SLIDES

In addition to showing the current slide, the presenter view also gives large previews of the previous and next slides or files. Hovering over these will bring the file into focus, and the mouse cursor changes to an arrow pointing left or right. Clicking the image changes slides.



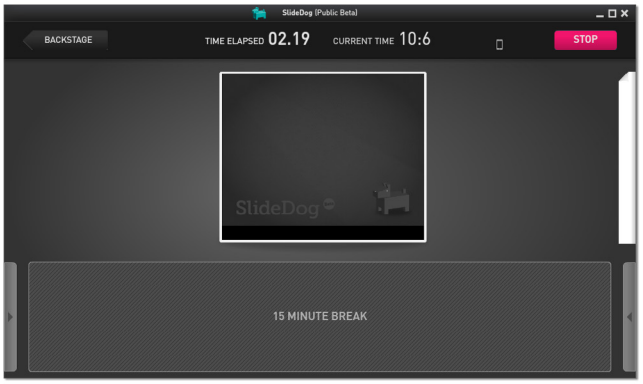
8 CHANGING PRESENTATIONS

When the presenter is showing the last slide of a presentation, the next preview will show the background image, and clicking this brings the presentation to an end. It is also possible to change playlists directly in the interface. In this screen, the presenter was the first to go on stage, but there is another presentation following him. This is shown by the sliver of another playlist peeking out at the bottom right.



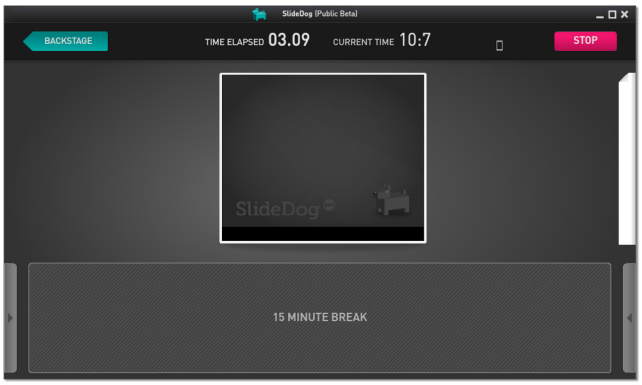
9 GOING TO A BREAK

Breaks are represented in the same manner as playlists on stage, except that they are passive elements without any files. During breaks the background image will be shown and the timer will start counting from zero again.



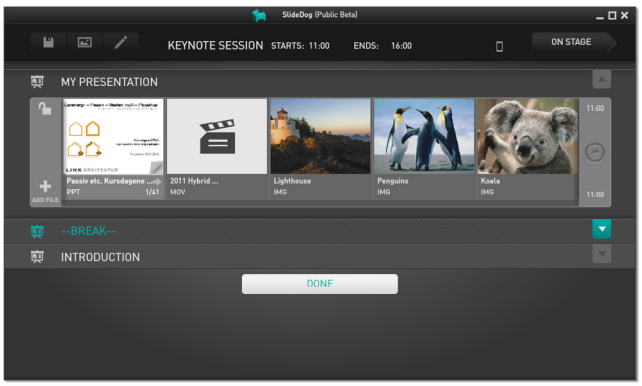
10 GOING BACKSTAGE

The presenter or organizer can go backstage at any point during the show by clicking the top left button, without affecting what's being shown to the audience.



11 LIVE BACKSTAGE

The backstage is shown in the same dimmed down palette when live. The current presentation, or in this case break, is highlighted in green. The user can still check any of the other presentations without affecting the files displayed to the audience, but not change their order or add new files.



15

NEXT STEPS

The development of Slidedog was very much a battle of priorities. Given the size of the team and the project time frame, there were constantly features that had to be omitted and perspectives that had to be downplayed.

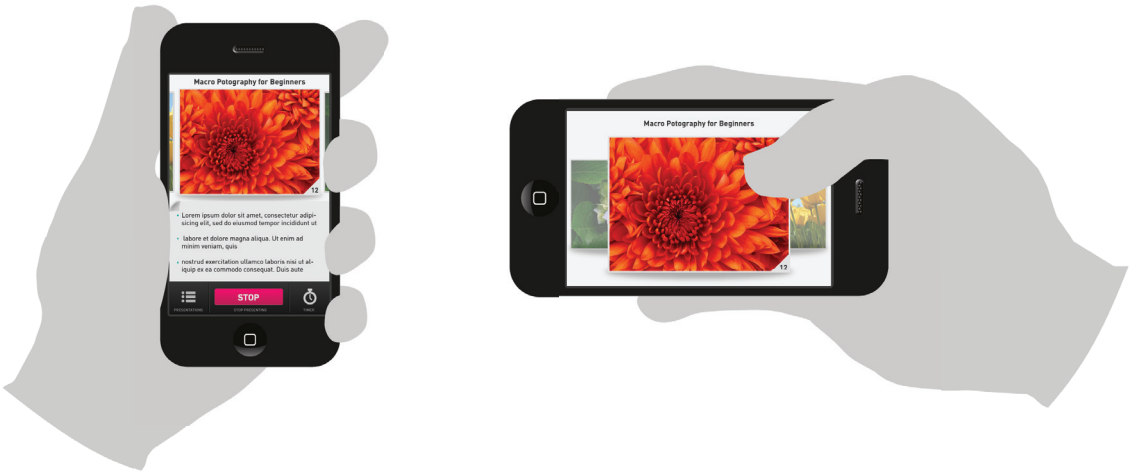
The continuation of the product will likely follow in these same steps, and lack of ideas or work to do certainly won't be the limiting factor.

The current status of the project marks the end of the second major build phase in the feedback loop. There are still minor bugs that need fixing, but beyond that the next release of Slidedog will likely be made available to the public in much the same state as seen here.

The most urgent need to address at this point is thorough usability testing. This was downplayed after the end of the first build phase in favor of focusing on discovering user needs. The layout and functionality of the program has changed dramatically since then, hopefully nearing something closer to it's final structure. This increases the relevance of user feedback both on usability and functionality.

The last two development cycles have focused on two major user groups; presenters and organizers respectively. The third major group, audience, has been somewhat neglected, and the next cycle should place an increased emphasis on them. The audience experience is a major motivation in the software choices of both presenters and organizers.

THE APP
USABILITY



Some early explorations of applying the Slidedog interface design principles to the remote app. The app could provide the same level of control as the Slidedog presenter view, with previews of the slides of files, as well as presenter's notes.

The Slidedog remote app needs to be brought in line with the rest of the interface. It's development has not been a part of the thesis project, and subsequently the two user experiences are not very consequent. This work includes not only the look and feel, but also improving the immediacy in use.

Currently, the most ovious problems are with connecting the app. The current implementation involves setting up a HTTP server in Slidedog and connecting the remote by entering the computer's IP. This is a major threshold that risks the app becoming just a curiosity for the technically interested instead of seeing widespread use.

Ideally, connecting the app should be near automatic and instantaneous. At the same time it needs to include some sort of authentication to prevent any nearby user or audience member from taking control over someone else's presentation. There are several approaches to improving this connectivity, such as user logins, or the solution described in the use sequence on page 186.

USABILITY TESTING

TEST SETTING

With the second iteration of the interface design being much more far-reaching than anticipated, the thesis project ended before a release was ready for user testing.

The new version is nearing a level of completion and stability that is ready for public use, and after this usability testing will be the top priority. This is particularly important in light of the functionality changes it has undergone over the last iteration.

The critical challenge will be finding a text context that accurately mimics real world usage. The differences between corridor testing and actual live usage were evident in the previous round, where the latter provided much more valuable insights.

Ideally, the testing should be done in live settings similar to Mixer 2012 with inexperienced users in a real presentation setting, but without the same high stakes. Favorable testing situations might be settings like internal meetings for businesses, where the there are multiple presenters, but where the consequences of failure are much lower.

SPLIT TESTING

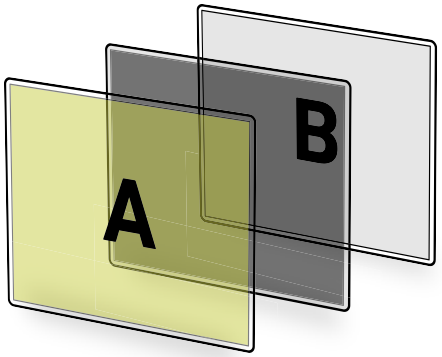
In addition to thourughly testing current design solutions in the released product, it can be beneficial to perform split or A/B testing on certain features. This can provide very specific feedback on some of the issues that have been the subject of debate and uncertainties.

This approach can applied both online by releasing different variations to different user groups and tracking the usage metrics, or in controlled usability tests where the different proposals are tested on different users and the results compared.

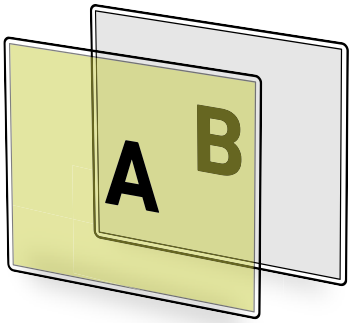
Some of the candidates for this type of split testing are the current terminology compared to the old names, the different layouts of the backstage module, and the two different approaches to previewing files.

Several of these issues already have working implementations for both alternatives, so the development required to produce the split versions is currently very low.

TRANSITIONS
FILE SWITCHES



Transitions today: Fade to black from current slide, and fade in from black to next slide.



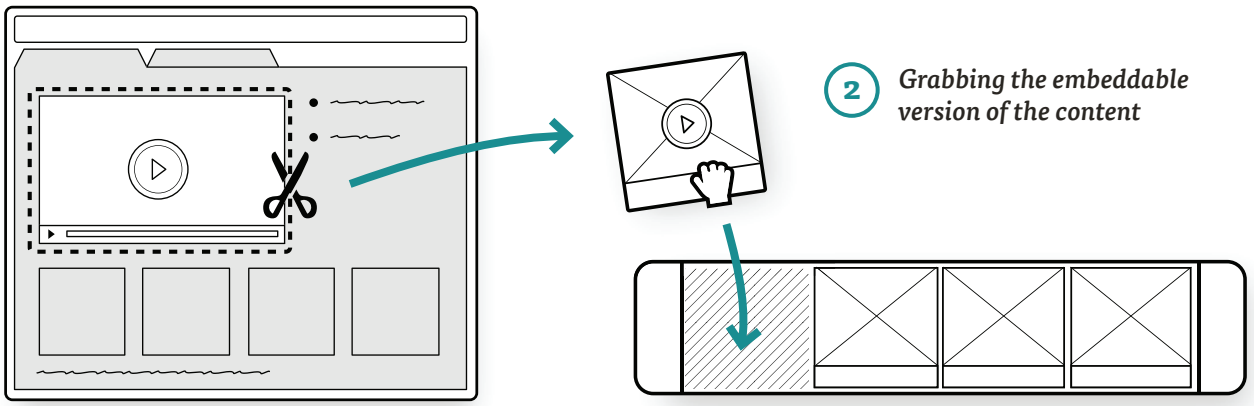
Intended solution: Direct cross fading between slides without any loading time.

A problem with the program's goals of making presentations seamless is that this essentialy renders it invisible. The hiccups, delays and awkward interruptions we often see today are immediately noticeable and memorable, but their absence is not. This poses the challenge of how to make the program recognizable to the audience, and the main opportunity lies in the switches between files. These transitions are essentially Slidedog's face to the world, and could become a signature of the program.

Other presentation tools like Keynote and Powerpoint already come with a plethora of different transitions, and these are subject to much abuse. Especially the more elaborate animations can be very distracting and rarely add much to the audience experience. They have lost their "wow-factor" long ago, and Slidedog has to be careful not to fall prey to these same traps. Slidedog will of course show files the way the author intended them, including animations, bullets and transitions, but the switching between files is Slidedog's domain, and this has to be something distinctly different.

There are still technical obstacles to gaining full control over file switches. Essentially, Slidedog has to load upcoming files in advance, but keep them in the background until called upon. Implementation work has been done on this preloading of files, but it is still not fully functional at this time of writing.

DISPLAYING WEB CONTENT
APPROACH



1 *Finding media content for a presentation online*

2 *Grabbing the embeddable version of the content*

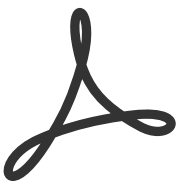
3 *Slidedog treats the content like any other file*

Web media platforms are increasingly making their content embeddable, meaning that the video, presentations, etc can be viewed online from any page and not just the host website. Embedding is already implemented for common platforms such as Youtube, Vimeo, Slideshare, Prezi, Google Docs and SlideRocket.

This can be very advantageous for SlideDog, mainly because it applies technology developed by the content providers themselves instead of having to develop solutions from scratch. The approach is very much akin to how SlideDog relies on various third-party players for file playback. Embedded content is generally viewable cross-platform and across browsers, which is a great bonus for future mobile work. Compared to showing files on for instance Youtube.com, embedding allows presentations of just the desired web content, removing distractions like comments and related files.

The challenge to this approach is first and foremost the dependency on an internet connection. The files have to be loaded during the presentation, so if the connection is slow the presentation may stutter and lag. Along with this comes a general distrust of using web content in live presentations, although this may likely improve over time. From a design point of view, relying on emedded content means losing some control over the interactions as you have to rely on the conventions established by each individual platform. Designing the sequence of adding files might present a usability challenge in itself, especially if it requires user accounts for the different sites.

FILE TYPES
ANALYSIS & FUTURE WORK



Since SlideDog is at its core a presentation launchpad, the number of formats supported and how well it handles these different files will remain crucial. A significant portion of the development work is also dedicated to this. Some improvements have been made over the course of the project, to the point where all the supported file types are at the very least functional and relatively straightforward to work with.

Still there are lots of issues to be dealt with and improvements to be made. The long-term goal is that viewing the files from SlideDog actually adds value, as opposed to viewing it in its native environment.

POWERPOINT

Issues:
Most have a large number of slides (double or even triple digits) that make them less than ideal to display in a playlist. The issue is a tradeoff between designing for file-first or slide-first use. The current implementation of expanding file to show 3 slides introduces a second scroll bar and is less than ideal for long documents. Progressive disclosure of bullets or states in a slide can't be previewed and may cause confusion in the cover flow.

Possible changes:
Allow files to be unlinked and slides edited separately, so that order can be rearranged and other files inserted in between slides. Allow files to be expanded to show all slides at once. Register number of bullet points or states in each slide to allow better predictions for the user.

PDF

Issues:
PDFs are used in two main cases: to show text heavy documents or graphics critical pieces. PDFs lack the common presenter's tools like notes and timers, and benefit from being displayed through SlideDog. Text documents will typically have a landscape orientation and be unreadable at thumbnail size, whereas graphics pieces can have any number of aspect ratios and a very high level of detail.

Possible changes:
Pages in PDF documents should still behave the same as slides in powerpoints, including unlinking and display of all slides at once. In addition the ability to zoom in on PDFs might be valuable when showing graphics.

WORD

Issues:
Document format is ill suited for thumbnails view because distinguishing features are lost when the document is scaled down. Vertical format also means that screen area is

Possible changes:
Word is a secondary format supported specifically to adapt SlideDog to meetings and discussion settings. Will rarely be the medium of choice when presenting in front of a live audience, so it should not be the first priority for development.

One possible feature is to allow live editing of word documents from the Notes panel, which could be useful for secretaries recording meetings.

EXCEL

Issues:
Use cases and issues are analogous to word documents. May also be used in sales meetings, but actual usage data is needed to determine relevance. Graphics such as charts and diagrams are a likely the primary reasons to include Excel files in presentations.

IMAGES

Issues:
Images are the only files that are rendered by SlideDog and thus not dependent on other file viewers. Display works well and is straightforward. Slideshows with a large number of files take up lots of space in the playlist. Orientation of pictures varies, and the aspect ratio is rarely the same as the

Possible changes:
Downloaded pictures often have long and meaningless names. Might benefit from having the ability to change names within playlist.
Add ability to zoom on image would be an obvious bonus when working with photographs.

FILE TYPES
ANALYSIS & FUTURE WORK

PREZI

Issues:
The current implementation is more appropriate for displaying web pages than web media. There is still a general hesitation for presenters to display web content because of insecurities over unforeseen circumstances.

Possible changes:
Web pages are the file types that would benefit most from preloading files. Even if the web browser opens quickly, the audience still has to wait for the web page to actually load.

VIDEOS

Issues:
Performance of video previewing in the latest release improved significantly. The main issue is that the video thumbnails are frequently uninformative, as these are captured from the first frame which is generally black. Video can't be inserted in between slides, only between files.

Possible changes:
Add ability to preview videos without showing it to the audience. Can be improved by cycling screen captures from intervals throughout the clip on thumbnail hover, or by showing thumbnails of the given cursor position when hovering over a point on the timeline.

The level of user control over video files need to be considered. Several features have been suggested, which are geared towards advanced users. Allowing the user to predefine intervals of a video clip to show and being able to loop videos have been requested repeatedly. There are currently no sound or volume controls, which is unconventional but which removes confusion of having to deal with both OS sound settings and the application settings in conjunction.

FILES
AUTOMATIC PLAYBACK

Automatic playback of files is a common request for more professional events. The common use case in these scenarios is to play an introduction or sequence before the show starts, while people are arriving and taking their seats. If a dedicated technician is at hand, he can take care of this, but there are often other tasks and people who demand attention at the same time, such as presenters arriving last minute with their files.

A second use case for automatic playback is for highly scripted presentations such as business pitches. These are often very short, from 2 to 10 minutes, and rehearsed in detail beforehand. The aim is to deliver a message that is very much to the point with conviction, and allowing the presenter freedom from manually controlling the presentation might be of significant value.

A third use case might be outside of presentations strictly, used for business stands at expos and conventions. Usually, the purpose of these stands is to allow the audience to engage representatives in direct dialogue. At the same time, the stands also have to attract the attention of the audience even if the people are otherwise occupied.

16

FUTURE WORK

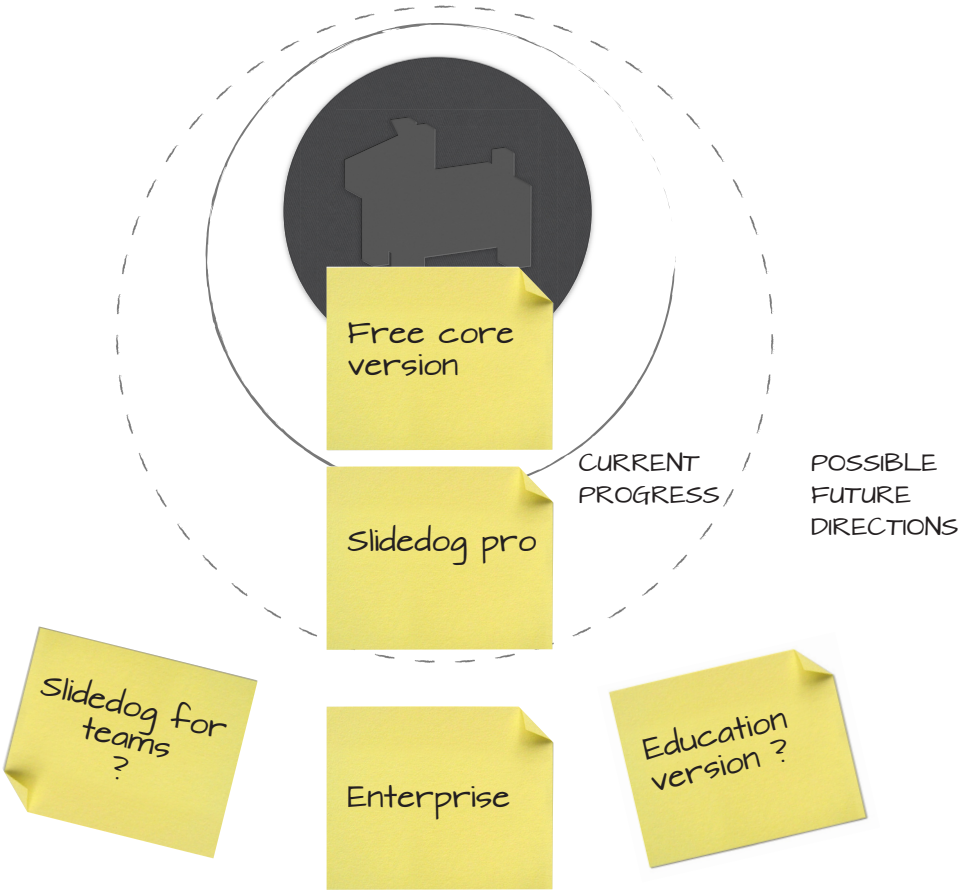
The future direction of the project will be strongly influenced by user response, and with which groups the service gains a foothold. The users' role so far has been more as beta testers than potential customers. For development purposes, this user base only needs to be a modest size to provide valuable learning.

This focus will likely shift over the coming months towards growing the user base and gaining wider recognition. This means more efforts and activities invested in marketing, but it also means approaching users with a different mindset. The goal is that people start using Slidedog regularly as a tool for presentations, and for this to happen the product has to be reliable and gain the user's trust.

Beyond this, Slidedog could take several directions as a paid service with different ways to segment the offering. Common to most of these is that the program needs to grow from just the desktop application to an actual presentation platform that is accessible through multiple touchpoints.

Some possible directions forward have been explored, but most of these are of course yet to reach the drawing board.

PRODUCT ROADMAP
SLIDEDOG



The long-term goal is to offer Slidedog as a freemium product, with a free core and premium features segmented towards different user groups. During the beta phase however, the focus is on adapting and improving the application while growing a user base, and the entire program is released free to the public. The specifics as to what features will be free or premium are still not finalized.

The overall idea is to make the free version a tool for individual presenters, and the paid version geared towards groups and organizations. This has been a factor in the latest revisions to the information architecture; structuring features so that the paid and free versions can work meaningfully as standalone products or together.

However, what's still unclear is how many versions there will be of the service, and what specific features distinguish one from another. The future road map includes several different possibilities:

PRODUCT ROADMAP
SEGMENTATION

FREE

The free version of SlideDog has to have the core functionality that the other products build and expand on. It has to cater to a wide audience, mainly individual presenters, to build a solid user base. This version represents a balancing act between providing a useful standalone tool on one hand, but at the same time reserving enough features to incentivize users to upgrade.

PRO

The pro version is geared for small events with multiple speakers, with the addition of planning and scheduling tools. It will encompass all the current functionality of the desktop application, but with the likely addition of a web interface for invitations, file management and publishing. The main targets for the pro version are not individual presenters, but rather people in charge of events. This does however have the potential to expose a lot of presenters to the program, who in turn may become free users.

TEAM

There may be potential for a separate product more specifically tailored towards collaborative work. The primary use would be for meetings and workshops, of which presentation software is often a part today. Here it serves quite different purposes than in traditional presentations; the audience is much more active,and sometimes the distinctions between audience and presenter are fluid. The efforts spent on preparation and rehearsing is typically low, and the tools used have to be quick to pick up and learn. It might even be beneficial to encourage improvisation and to allow editing and creation on-the-fly.

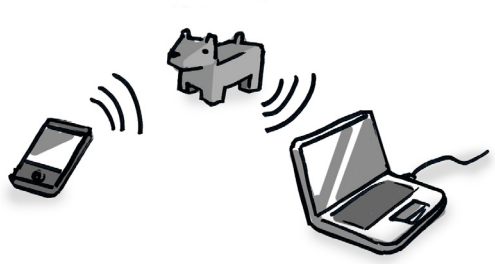
ENTERPRISE

An enterprise version of SlideDog would essentially be a combination of the other products, but adapted for a centralized administration and a common file management system. The enterprise version should allow for quite extensive customization such as user management or skinning, to the point where it can be adapted specifically to the organization's needs. There might also be potential to provide an added service custom tailoring the software. The product is mostly geared towards internal use in large organizations for running meetings, courses and conferences.

EDUCATION

There are currently plans for a preliminary project to see how SlideDog can be adapted to educational settings. This context shares some similarities with the meetings described above, where professionalism is not top priority, and where interaction between teacher and students is often encouraged. From a market perspective, selling to schools and universities directly may be challenging, with high demands on infrastructure and integration.

USE SEQUENCES
THE REMOTE

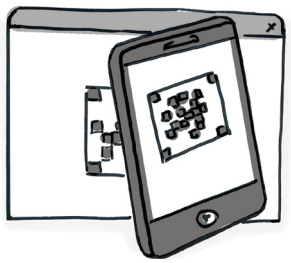


1 ***Enabling the remote***

By enabling the setting from the desktop application, it ensures only the presenter has access. It requires a conscious action on the part of the user.

2 ***Server is created***

A HTTP server is created by the application. This is unique for each instance of the software to avoid conflicting signals. Does not require any input from the user.



3 ***Presenter scans QR code***

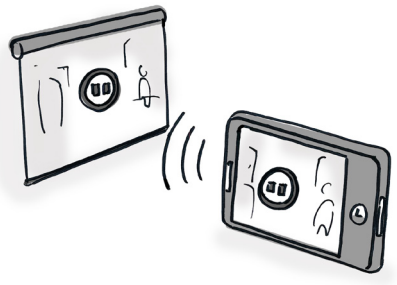
The presenter scans a QR code on the monitor containing the details of the server. The phone is now connected as a remote. If the app is not installed, the QR code directs to the app download.

4 ***Remote connected***

Presenter can start the presentation from his phone.

5 ***Viewing the presentation***

The presenter can view slides and notes on the phone screen, and change slides either by swiping or using the volume buttons.



6 ***Controlling files***

The app can be used to change between files and to control them, such as pausing and playing movies.

USE SEQUENCES
THE EVENT APP

1 ***Organizer creates event***

The event is set up in Slidedog, with schedule and presenters determined.

2 ***The audience arrives***

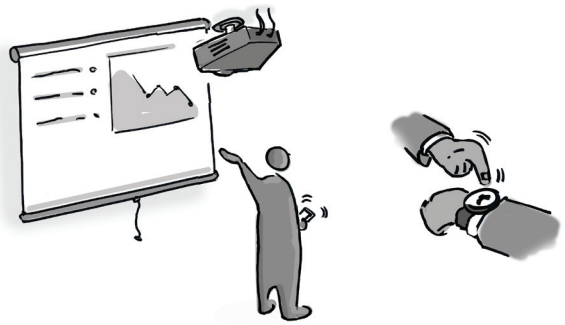
Audience and participants arrive at the venue before the show starts. All of the event metadata about presentations and times is available to the public, either through the website or a dedicated app.

3 ***Audience checks schedule***

The audience can check the where, when, who and what's for the event by scanning a qr code with their smartphone.

4 ***Emcee introduces speakers***

The information about the event can be printed out for the emcee or moderator who introduces the speakers.



5 ***Communication with speakers***

The organizer can give the speaker messages or warnings through the app, and the audience can use it to pose questions.

USE SEQUENCES
USING THE WEB UI

1 *Organizer creates event*

The organizer creates an event, either through the desktop application or online, and sets up the schedule of topics and speakers.

2 *Invitations are sent out*

The organizer can choose invite speaker to any of the presentations that are scheduled.

3 *Presenter receives mail*

The presenter receives the mail with a URL to upload his files. Clicking the link automatically creates a free user account.

4 *Presenter uploads files*

The presenter gains access to his slot in the event, where he can upload his files, as well as see the rest of the planned schedule and suggest changes. He can also download the program to make sure everything is displaying correctly.

5 *Files are synced*

Once the files are uploaded, they are synced to the computer with SlideDog installed and ready to be presented. The presenter can also make edits to his files before the presentation starts.

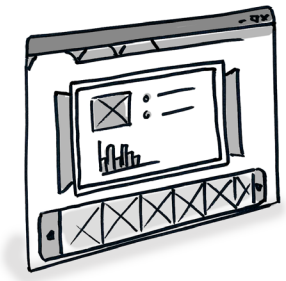
USE SEQUENCES
PUBLISHING

1 *Slidedog is used to to run event*

The organizer autmatically has access to the presenters' files through Slidedog

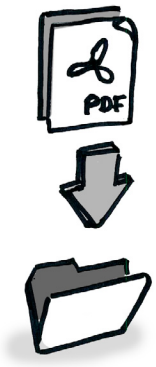
2 *Presenters give publishing permissions*

The individual presenters can decide whether or not their files can be made public in the process of uploading their files for the event



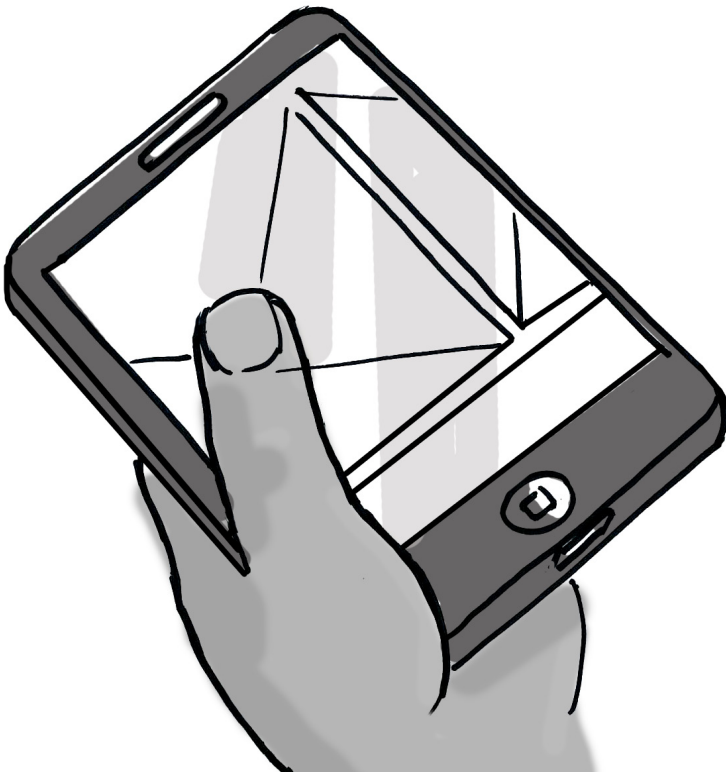
3 *Content is available online*

An online interface mirroring the presenter's view in Slidedog is used to diplay the playlists and files.



4 *Files made available for download*

The same interface can be used to download the files or entire presentations if the presenters have given explicit consent to do so.

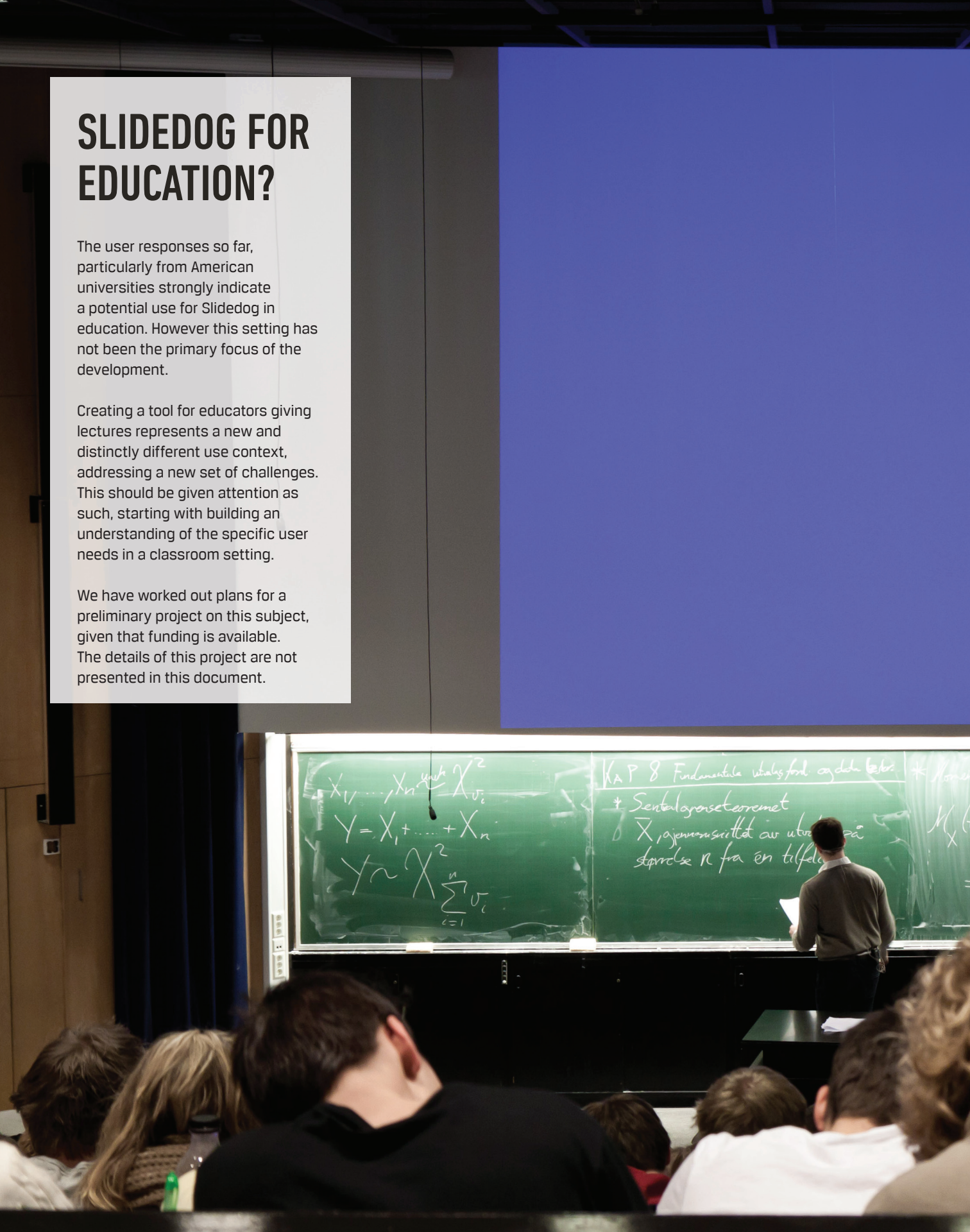


SLIDEDOG FOR EDUCATION?

The user responses so far, particularly from American universities strongly indicate a potential use for Slidedog in education. However this setting has not been the primary focus of the development.

Creating a tool for educators giving lectures represents a new and distinctly different use context, addressing a new set of challenges. This should be given attention as such, starting with building an understanding of the specific user needs in a classroom setting.

We have worked out plans for a preliminary project on this subject, given that funding is available. The details of this project are not presented in this document.




mail: vedarkri@stud
www.klovnelopet.com
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LAST WORDS

The work on this thesis has been an immense learning process made possible through the cooperation with Preseria. Seeing a product come to life and make it into the hands of users in such a short time span has been rewarding and a source of inspiration for the work.

As a learning experience in working with interaction design within a lean environment, I have seen both the benefits and the pitfalls. The process could have benefited from more discipline at times, and a more structured approach to the user testing, and insights gathering.

Yet the amount of progress made and the end results are an encouragement to continuing this experiment. Certainly, the benefits of programmers and designers working intimately together are obvious.

Process documentation has explicitly not been the main priority throughout the project. Working half a desk's length from Magnus and Dag made the process fluid and dynamic in a way that is hard to recreate on print. Many of the nuances and on-the-fly decisions that have impacted the end results are certainly lost in between the lines. Yet somehow this document is tipping the scales at nearly 200 pages.

To the readers who have made it all the way here: Thanks for the effort and sorry for the mess!

To Preseria: Thanks for all the work and dedication, and keep Slidedog alive and kicking. Hopefully we can pick up the work again over summer.