

# Eugene Bur

Sr. UX/UI Design Manager

UX Design Portfolio

# Lenovo Notesaver App

2017

## Overview

Lenovo was working on a Chromebook with a unique feature: touch-based keyboard that could use paper and a digitizer pen. They were looking for a way to add value and differentiate it in the marketplace. I was brought in as the product owner UX designer, where I worked with an Agile team of software and hardware engineers.

## Problem

Having created a solution in need of a problem, Lenovo needed to make this new technology functional. I had to create innovative ideas to give life to this product. I also had to navigate interfacing with Google to make sure the Chromebook worked in their ecosystem.



*Lenovo Chromebook concept*

# Lenovo Notesaver App

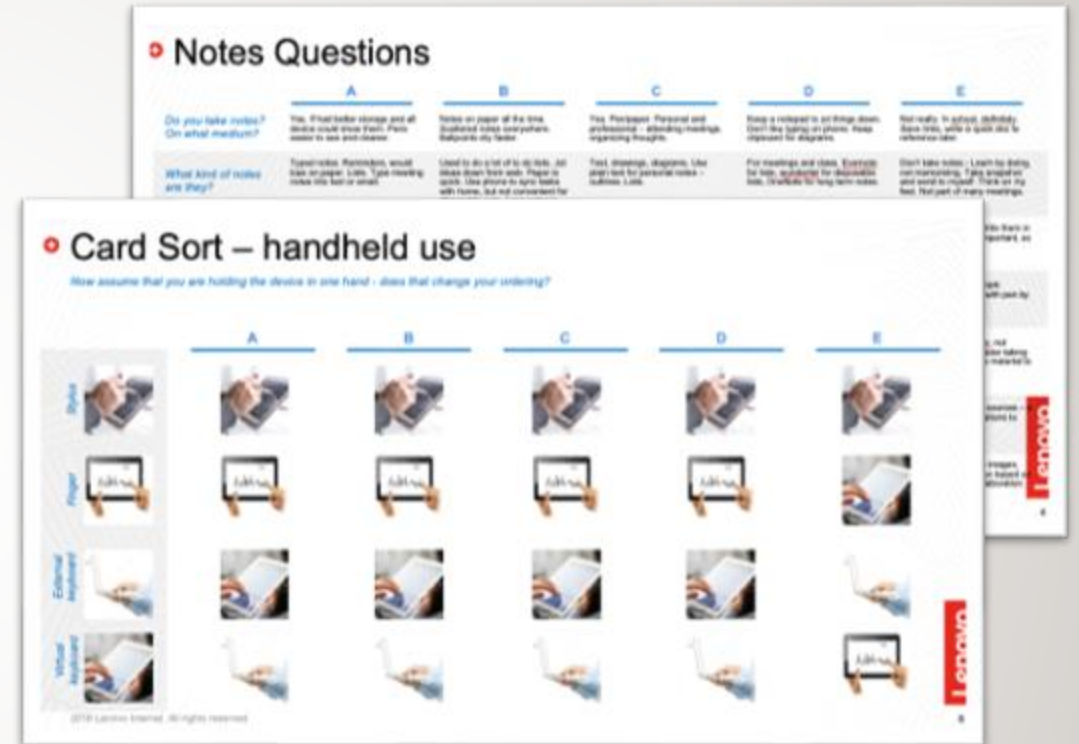
## Early Designs

- Immediately started by doing hallway interviews to understand people's behavior with a pen input, which turns out most people don't use, but thought notetaking the most likely use case
- Also ran simple card sorting around the question of physical form factor for note taking
- Brainstormed with team about individual notetaking process and came up with a feature matrix corresponding to the different form factors of the Chromebook

|                                | Paper Only | Paper w/ screen | Tablet | Note Keyboard |
|--------------------------------|------------|-----------------|--------|---------------|
| Feature                        |            |                 |        |               |
| 'New Page' symbol              | ✓          | ✓               |        |               |
| 'Send' symbol sharing          | ✓          | ✓               | ✓      | ✓             |
| Paper games                    |            | ✓               |        |               |
| Input recognition              |            | ✓               | ✓      | ✓             |
| Data detectors                 |            | *               | ✓      | ✓             |
| Math scratchpad                |            | *               | ✓      | ✓             |
| Quick conversions              |            | *               | ✓      | ✓             |
| Handwriting formatting         |            | *               | ✓      | ✓             |
| List Detection                 |            | *               | ✓      | ✓             |
| Organize, tag and search notes |            | *               | ✓      | ✓             |
| Handwriting editing            |            | *               | ✓      | ✓             |
| Document annotation            |            | *               | ✓      | ✓             |
| Content sharing                |            | *               | ✓      | ✓             |
| Full keyboard trackpad         |            |                 |        | ✓             |

\* Screen interaction only

Feature matrix

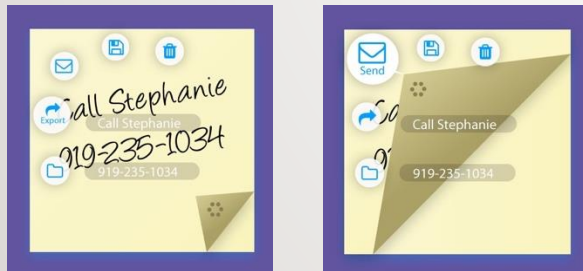


Research results

# Lenovo Notesaver App

## Early Designs

- Created lots of presentations of functionality for business buy-in
- Focused on there areas of features that were future-proofed against inevitable hardware improvements – intuitive written symbol/text analysis triggering extended actions, trackpad-like functionality to the touch-input keyboard, and quick-note widget with a conduit to a full application
- Went through several rounds of heuristic review of digital application
- Had to make constant adjustments to features and timetables based on business demands



Quick-note widget wireframes



Concept sketches of new functionality

# Lenovo Notesaver App

Results

## Outcomes

- Worked very closely with development team, finding compromise solutions to technical challenges, constantly adjusting feature roadmap
- Severely limited by hardware and Google's software limitations, but still found unique experiences to differentiate the pen tablet
- Our work produced several patent applications
- Heuristic evaluation highlighted problem of managing notes once they are created
- Planned for an e-ink version before project was cancelled



# Lenovo Admin Console (ThinkSmart Manager)

2017– 2018

## Overview

Lenovo had created a new technology that facilitated meetings and small conferences, and they needed to create a cloud-based administration console to manage the new devices. I was the only UX designer responsible for the cloud portion of the software solution, along with a large team of software engineers.

## Problem

This project was starting from nothing – features had to be defined, use cases created, interface had to be imagined, all with an immense deadline pressure for the hardware release. There was also the challenge of creating management software for a device that was constantly in flux.



*ThinkSmart Hub concept*

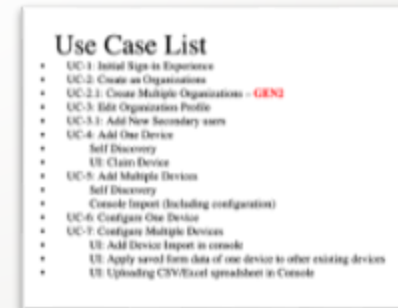
# Lenovo Admin Console (ThinkSmart Manager)

## Early Designs

- Started with regular discussions with engineers and product teams to assemble a set of use cases and matching features
- Designed feature map with long-term goal of creating a reusable platform
- Early sketching tried to capture features and catalog the various design patterns that would be needed
- Had to constantly calibrate functionality based on the Hub's in-room software being changed to match the hardware limitations



Sketches



Use Cases

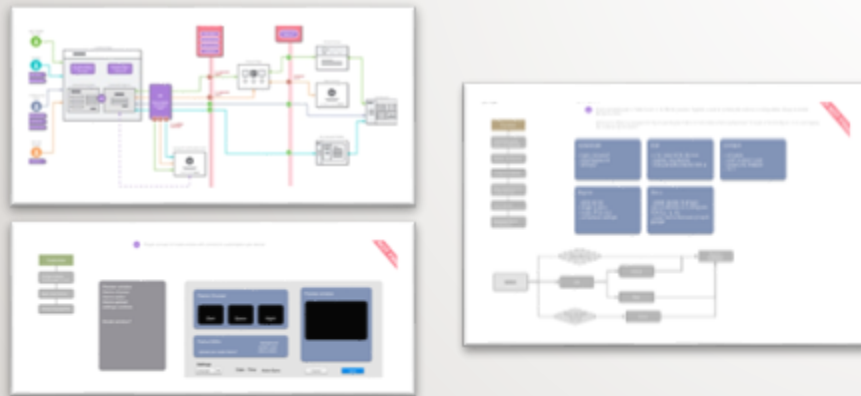


Feature Map

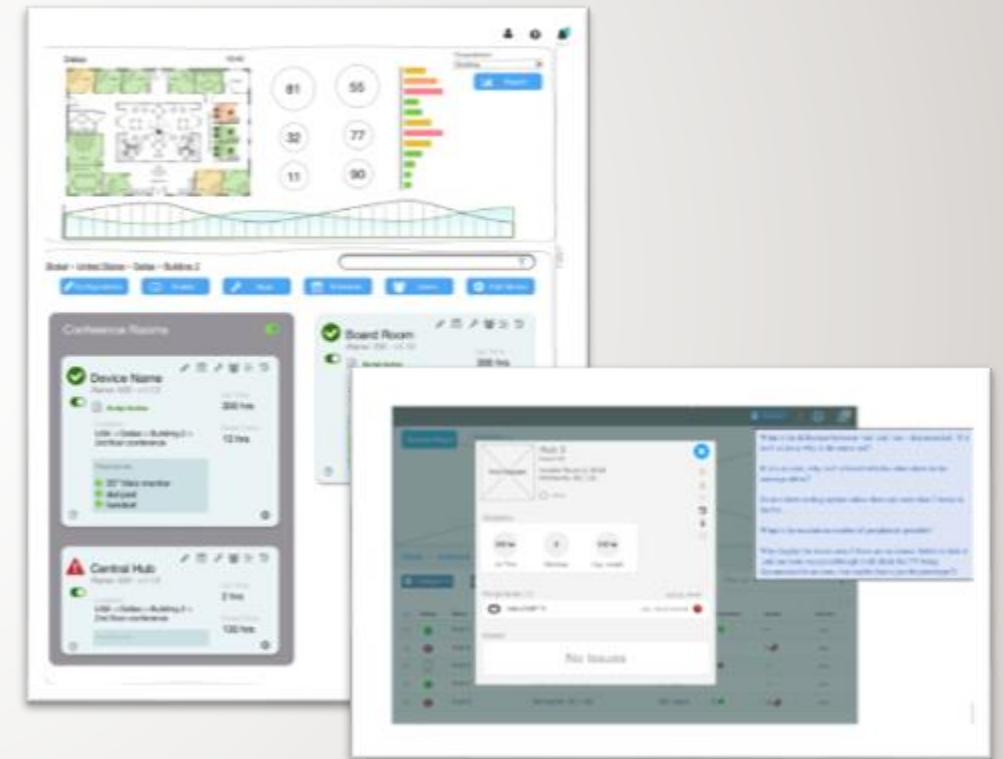
# Lenovo Admin Console (ThinkSmart Manager)

## Early Designs

- First interface designs struggled with best way to present data
- Finally went with a table paradigm with conscious decision for future growth
- I kept pulling other UX designers in my department for critique and ideation to provide valuable designer insight on the interface
- All the features were diagrammed and vetted with engineers, and were critical in documenting functionality



Flow diagrams



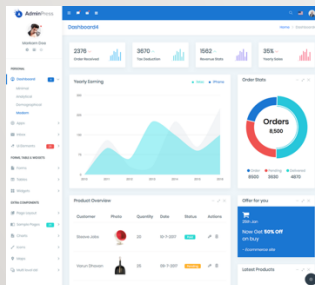
Wireframes



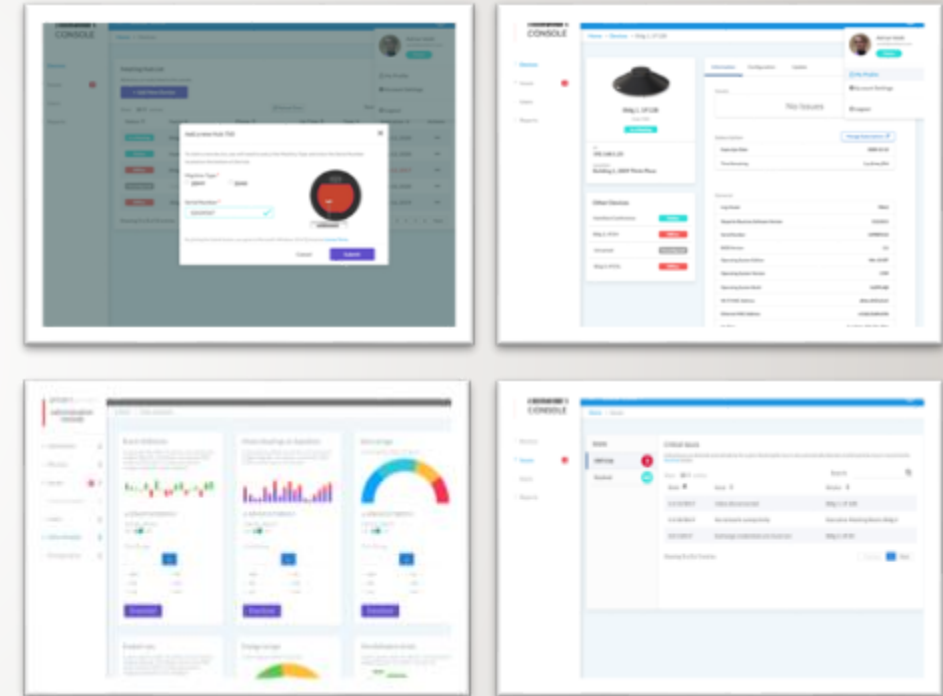
# Lenovo Admin Console (ThinkSmart Manager)

## Early Designs

- To speed up production, chose a pre-made theme as UI template
- Discovered that required a good, dedicated front-end developer who can manipulate the code
- Mockups became trivially fast, but developers wouldn't use all the theme's libraries, forcing custom solutions
- Created all designs in Axure interactive prototypes, with new prototypes for each new 'version'
- Developed more streamlined documentation process based on Lean UX, where the requirements of features were captured in Jira stories, but the behavior, look, and layout were defined in the Axure prototype, become the 'single source of truth' for the design



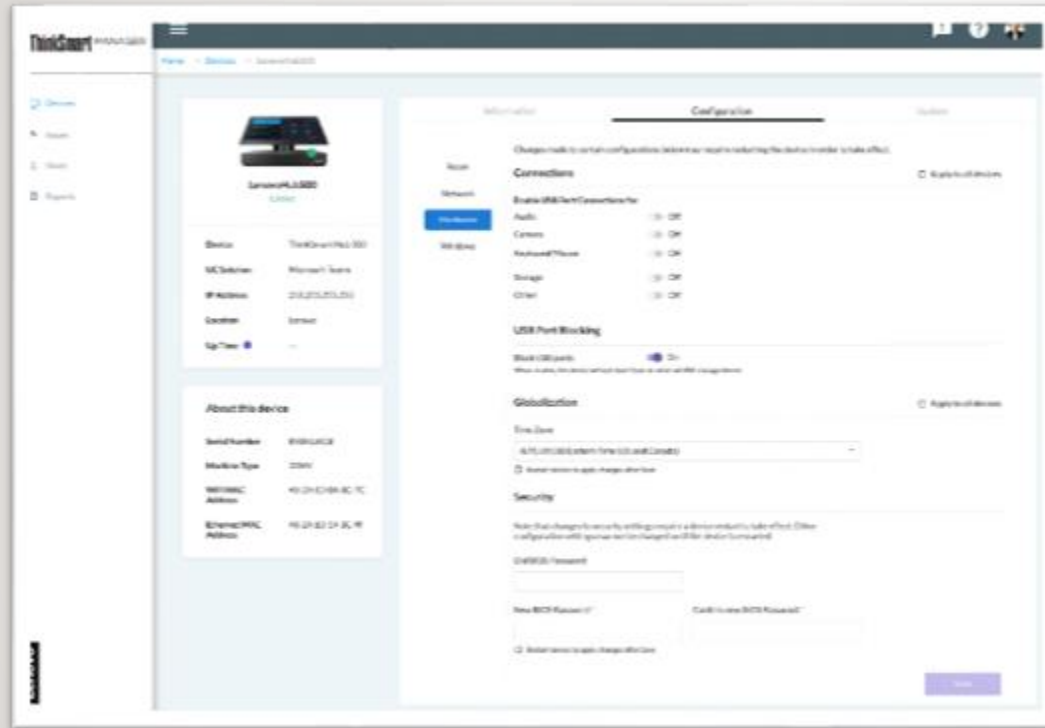
Source Theme



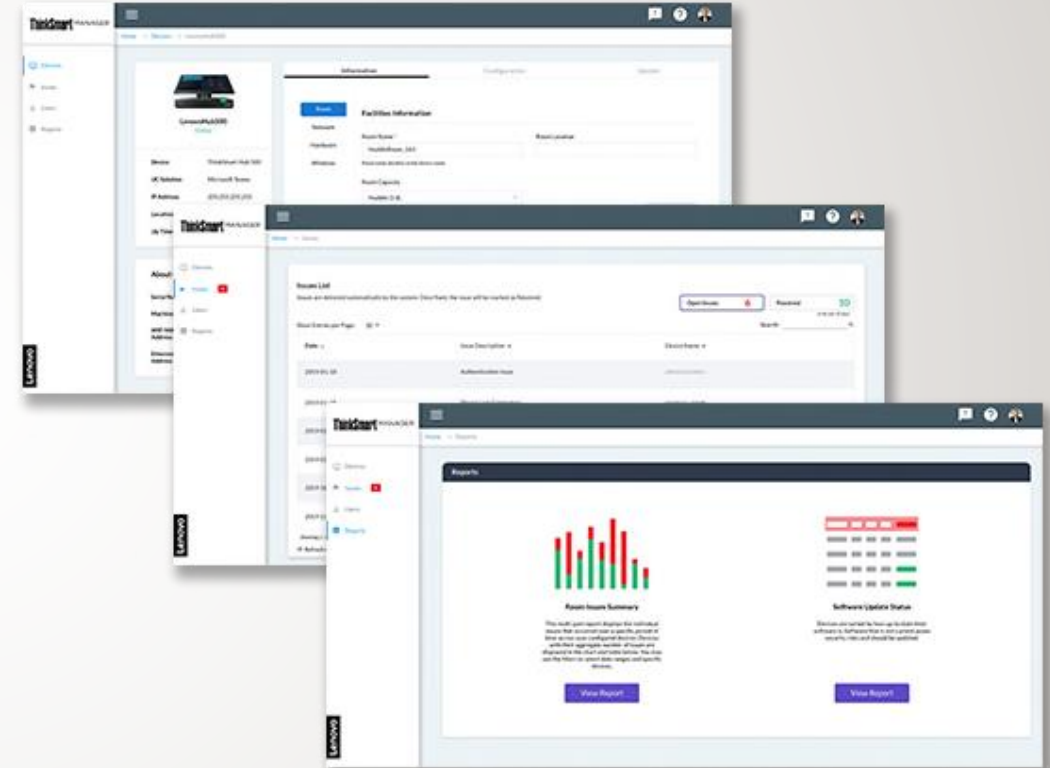
Prototype screens

# Lenovo Admin Console (ThinkSmart Manager)

Final Design



Final Production Version



# Lenovo Admin Console

Results

## Outcomes

- Successfully completed a very massive project with lots of components
- Navigation and interaction patterns proved to be reusable, and became the core of a new cloud platform focusing on device, user, and services management
- Communication was vital, as was early documentation, but I found I needed a central place to track it, especially as good ideas kept being descoped and forgotten about
- Did not use personas, because of company culture against them, which gave us little confidence in the solutions
- Product went through some limited usability testing with eye-tracking, resulting in confirmation that most of the user flows I designed were intuitive and easy to perform (except for the one flow I did not design)
- I won a Red Dot Design Award for the ease of use and design of ThinkSmart Manager.

# Ipreo UX Design Thinking – Persona Project

2013-2016

## Overview

I was the UX manager for a financial data company. I grew my team from 1 to over a dozen people. The company had no idea how to use UX or Design Thinking to help make the software.

## Problem

First problem was to re-educate the company from thinking that the UX department fixed buttons on websites, to understanding how to design software with the users in mind. Also, the company had 7 divisions with over 50 software products between them, most of which looked and behave completely differently. The culture of the company had to be changed.





# Ipreo UX Design Thinking – Persona Project

## Early Designs

- First steps were to present to the company the benefits of UX and UX process, assess entire software catalog, meet with product managers and discuss staffing for their projects, and then begin hiring people
- Broke UX down into four primary functions and promoted that concept throughout the company (as posters on walls, presentations, etc.)
- Hired good talent with at least two of the four functional skills and restructured the team to handle multiple internal clients
- Created a UX request workflow with an easy to remember address, allowing me to queue up and prioritize work



UX function posters (research, interaction, visual, development)



# Ipreo UX Design Thinking – Persona Project

## Early Designs

- Spearheaded new company initiative to educate product managers on how to use UX
- Hired staff with strong Research background to focus on creating personas and leading educational efforts
- Focused on promotional efforts to bring awareness to the persona concept and the personas in use across the software products
- Team created static persona templates, persona play cards, and a dynamic persona library



Persona template



Persona library wireframe



Persona cards – initial sketches, early mockup

# Ipreo UX Design Thinking – Persona Project

Final Design



Digital Persona Library



Wall of Personas



Persona Playing Cards

# Ipreo UX Design Thinking – Persona Project

Results

## Outcomes

- Persona library part of other initiatives, like a living style guide, UI code platform, and Design Studio
- Ultimately, too many personas
- Personas were built as 'proto-personas' and created from assumptions; when data changed, static printouts became unwieldy for so many personas
- Digital persona library (a very successful student project) was the only way to keep up with the quantity and rate of change
- Rarely got commitment to validate personas with actual users from project managers
- Tried to map personas to a universal timeline to find intersecting workflows
- No commitment to validate proto-personas with real user interviews
- EVERYONE had to be thinking in terms of personas to gain benefits; otherwise, software solutions were too prescriptive
- Surprisingly, most personas were not considered good people
- Very effective overall strategy – changed the behavior of the product and development teams; personas still in use

# LabCorp Report Modernization

2011 – 2012

## Overview

I was the lead UX designer for several of LabCorps software products. One project was to modernize the lab results seen by doctors and patients. I led a small team of two UI designers.

## Problem

Over 100 different report types with significant information density made reading results and reacting to critical information difficult. We wanted to reduce the rate of errors from trying to read reports, catch nascent results earlier, and modernize the reports.

| <b>LabCorp</b>                                                                                                                                                                   |            | LabCorp Houston<br>7207 North Gemini<br>Houston, TX 77040 |                        | Phone: 713-856-8288 |                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------------------------------------------------------|------------------------|---------------------|----------------|
| Ordering Physician's Office Address                                                                                                                                              |            | Patient ID                                                | Caregiver Name         | Accession Number    | Accession Date |
| 099-335-0279-0                                                                                                                                                                   |            |                                                           | SO(4230486)            | 09149130            | 95-4-222-1251  |
| Patient Last Name                                                                                                                                                                |            | Account Balance                                           |                        |                     |                |
| PATIENT                                                                                                                                                                          |            | Professional Co-Op Service Inc                            |                        |                     |                |
| First Name/Name                                                                                                                                                                  |            |                                                           |                        |                     |                |
| SAMPLE                                                                                                                                                                           |            | Person Mails Name                                         |                        |                     |                |
| Person ID#                                                                                                                                                                       |            | Person Phone                                              |                        | Last Update         |                |
| 57/02/12                                                                                                                                                                         |            | 01/27/12                                                  |                        | Sex F Training Yes  |                |
| Person Address                                                                                                                                                                   |            | Additional Information                                    |                        |                     |                |
| Date and Time Collected                                                                                                                                                          |            | Date Received                                             | Date and Time Reported | Reference Range     | Units          |
| 04/28/08 22:15                                                                                                                                                                   |            | 04/28/08                                                  | 04/31/08 08:00CT       | HDL-C               | mg/dL          |
| Test Order                                                                                                                                                                       |            |                                                           |                        |                     |                |
| CMPI4LP+TP+TSR+SAC+CBC/D/P... Vitamin B12 and Folate Vitamin B12-Hydroxy-Vitamin B12                                                                                             |            |                                                           |                        |                     |                |
| TESTS                                                                                                                                                                            |            |                                                           |                        |                     |                |
| TESTS                                                                                                                                                                            | RESULT     | FLAG                                                      | UNITS                  | REFERENCE           | INTERVAL LAB   |
| CMPI4LP+TP+TSR+SAC+CBC/D/P...                                                                                                                                                    |            |                                                           |                        |                     |                |
| <b>Glucose, Serum</b>                                                                                                                                                            | <b>116</b> | <b>High</b>                                               | mg/dL                  | 65 - 99             | 01             |
| Hemoglobin A1C                                                                                                                                                                   | 5.6        |                                                           | %                      | 4.8 - 5.9           | 01             |
| Current guidelines recommend a treatment goal of <7.0% for diabetic patients.                                                                                                    |            |                                                           |                        |                     |                |
| Uric Acid, Serum                                                                                                                                                                 | 6.8        |                                                           | mg/dL                  | 2.4 - 8.2           | 01             |
| BUN                                                                                                                                                                              | 16         |                                                           | mg/dL                  | 5 - 26              | 01             |
| Creatinine, Serum                                                                                                                                                                | 1.1        |                                                           | mg/dL                  | 0.5 - 1.5           | 01             |
| Sodium, Serum                                                                                                                                                                    | 142        |                                                           | mno/L                  | 135 - 145           | 01             |
| Potassium, Serum                                                                                                                                                                 | 4.8        |                                                           | mno/L                  | 3.5 - 5.2           | 01             |
| Chloride, Serum                                                                                                                                                                  | 102        |                                                           | mmol/L                 | 97 - 108            | 01             |
| Carbon Dioxide, Total                                                                                                                                                            | 26         |                                                           | mmol/L                 | 20 - 32             | 01             |
| Calcium, Serum                                                                                                                                                                   | 9.9        |                                                           | mg/dL                  | 8.5 - 10.6          | 01             |
| Phosphorus, Serum                                                                                                                                                                | 3.6        |                                                           | mg/dL                  | 2.5 - 4.5           | 01             |
| Magnesium, Serum                                                                                                                                                                 | 2.0        |                                                           | mg/dL                  | 1.4 - 2.6           | 01             |
| Protein, Total, Serum                                                                                                                                                            | 7.6        |                                                           | g/dL                   | 6.0 - 8.5           | 01             |
| Albumin, Serum                                                                                                                                                                   | 4.5        |                                                           | g/dL                   | 3.5 - 5.5           | 01             |
| Globulin, Total                                                                                                                                                                  | 3.1        |                                                           | g/dL                   | 1.5 - 4.5           | 01             |
| A/G Ratio                                                                                                                                                                        | 1.5        |                                                           |                        | 1.1 - 2.5           | 01             |
| Lipids                                                                                                                                                                           |            |                                                           |                        | -                   | 01             |
| <b>Cholesterol, Total</b>                                                                                                                                                        | <b>230</b> | <b>High</b>                                               | mg/dL                  | 100 - 199           | 01             |
| Triglycerides                                                                                                                                                                    | 91         |                                                           | mg/dL                  | 0 - 149             | 01             |
| HDL Cholesterol                                                                                                                                                                  | 41         |                                                           | mg/dL                  | 40 - 59             | 01             |
| Comment HDL cholesterol values >59 mg/dL are associated with reduced cardiac risk.                                                                                               |            |                                                           |                        |                     |                |
| VLDL Cholesterol Cal                                                                                                                                                             | 91         | <b>High</b>                                               | mg/dL                  | 5 - 40              | 01             |
| LDL Cholesterol Calc                                                                                                                                                             | 131        | <b>High</b>                                               | mg/dL                  | 0 - 99              | 01             |
| T. Chol/HDL Ratio                                                                                                                                                                | 2.3        |                                                           | ratio units            | 0.0 - 4.4           | 01             |
| LDL/HDL Ratio                                                                                                                                                                    | 1.0        |                                                           | ratio units            | 0.0 - 3.2           | 01             |
| C-Reactive Protein, Cardiac                                                                                                                                                      | 1.0        |                                                           | mg/L                   | 0.00 - 3.00         | 01             |
| Relative Risk for Future Cardiovascular Event                                                                                                                                    |            |                                                           |                        |                     |                |
| Low <1.00                                                                                                                                                                        |            |                                                           |                        |                     |                |
| Average 1.00 = 3.00                                                                                                                                                              |            |                                                           |                        |                     |                |
| High >3.00                                                                                                                                                                       |            |                                                           |                        |                     |                |
| PATIENT, SAMPLE                                                                                                                                                                  |            | 099-335-0279-0                                            |                        |                     | Seq # 1515     |
| FINAL REPORT Page 1 of 3                                                                                                                                                         |            |                                                           |                        |                     |                |
| This document contains private and confidential health information protected by state and federal law.<br>If you have received this document in error, please call 800-877-7831. |            |                                                           |                        |                     |                |
| ©2004-07 Laboratory Corporation of America © Holdings<br>All Rights Reserved<br>DOC1 Ver 1.38                                                                                    |            |                                                           |                        |                     |                |

LabCorp report (before)



# LabCorp Report Modernization

## Early Designs

- Initially, the direction was to attempt to create visual chunking of related data.
- Color bars were used to break apart the page into digestible sections.
- Changes to font size created a visual hierarchy
- Color helped bring prioritization to certain results

|                                                                                             |  |  |  |                    |  |  |  |                                |  |  |  |                         |  |  |  |                    |  |  |  |
|---------------------------------------------------------------------------------------------|--|--|--|--------------------|--|--|--|--------------------------------|--|--|--|-------------------------|--|--|--|--------------------|--|--|--|
| 099-335-0279-0                                                                              |  |  |  | 50162304861        |  |  |  | 09149190                       |  |  |  | 954-322-1257            |  |  |  | 09                 |  |  |  |
| <b>PATIENT</b>                                                                              |  |  |  | Patient Last Name  |  |  |  | Professional Co-Op Service Inc |  |  |  | Account Address         |  |  |  |                    |  |  |  |
| <b>SAMPLE</b>                                                                               |  |  |  | Patient First Name |  |  |  | Patient Middle Name            |  |  |  |                         |  |  |  |                    |  |  |  |
| Patient SSI                                                                                 |  |  |  | Patient Phone      |  |  |  | Total Volume                   |  |  |  | 2700 N 29th Ave Ste 106 |  |  |  | Hollywood FL 33020 |  |  |  |
| Age (Y/M/D)                                                                                 |  |  |  | Date of Birth      |  |  |  | Sex                            |  |  |  | Fasting                 |  |  |  |                    |  |  |  |
| 57/02/12                                                                                    |  |  |  | 01/27/51           |  |  |  | F                              |  |  |  | Yes                     |  |  |  |                    |  |  |  |
| Patient Address                                                                             |  |  |  |                    |  |  |  | Additional Information         |  |  |  |                         |  |  |  |                    |  |  |  |
| Date and Time Collected                                                                     |  |  |  | Date Entered       |  |  |  | Date and Time Reported         |  |  |  | Physician Name          |  |  |  | NP                 |  |  |  |
| 04/08/08 09:50                                                                              |  |  |  | 04/08/08           |  |  |  | 04/11/08 04:05ET               |  |  |  | MILES                   |  |  |  | J                  |  |  |  |
| Tests Ordered                                                                               |  |  |  |                    |  |  |  |                                |  |  |  |                         |  |  |  |                    |  |  |  |
| CMP14+LP+TP+TSR+5AC+CBC/D/P...; Vitamin B12 and Folate; Vitamin D, 25-Hydroxy; Venipuncture |  |  |  |                    |  |  |  |                                |  |  |  |                         |  |  |  |                    |  |  |  |
| TESTS                                                                                       |  |  |  | RESULT             |  |  |  | FLAG                           |  |  |  | UNITS                   |  |  |  | REFERENCE INTERVAL |  |  |  |
|                                                                                             |  |  |  |                    |  |  |  |                                |  |  |  |                         |  |  |  |                    |  |  |  |

Before

[illegible]

Mockup

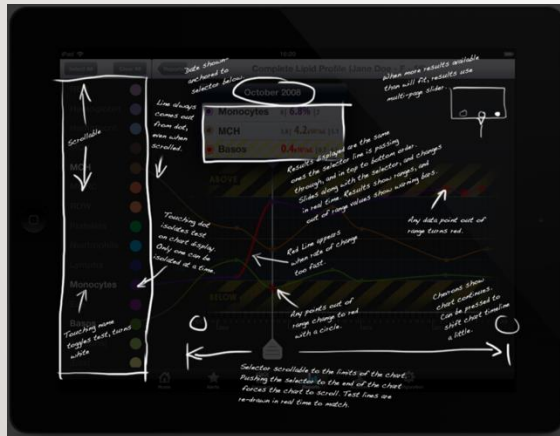
[illegible]

After

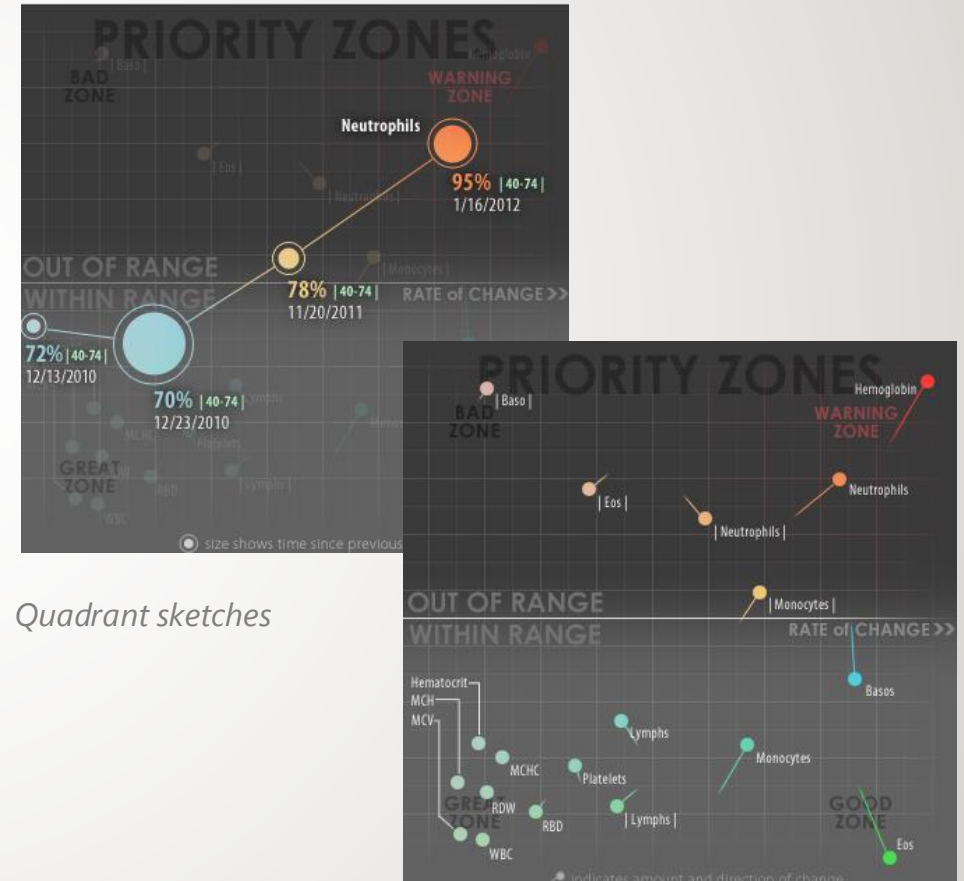
# LabCorp Report Modernization

## Early Designs

- Also began exploring a digital version of a report that was viewable on a tablet
- Explored an innovative 'quadrant' approach to results – focusing the user's attention to truly significant result changes, and allowing the normal results to be ignored
- Incorporated historical data results into the display



Early tablet interface sketch



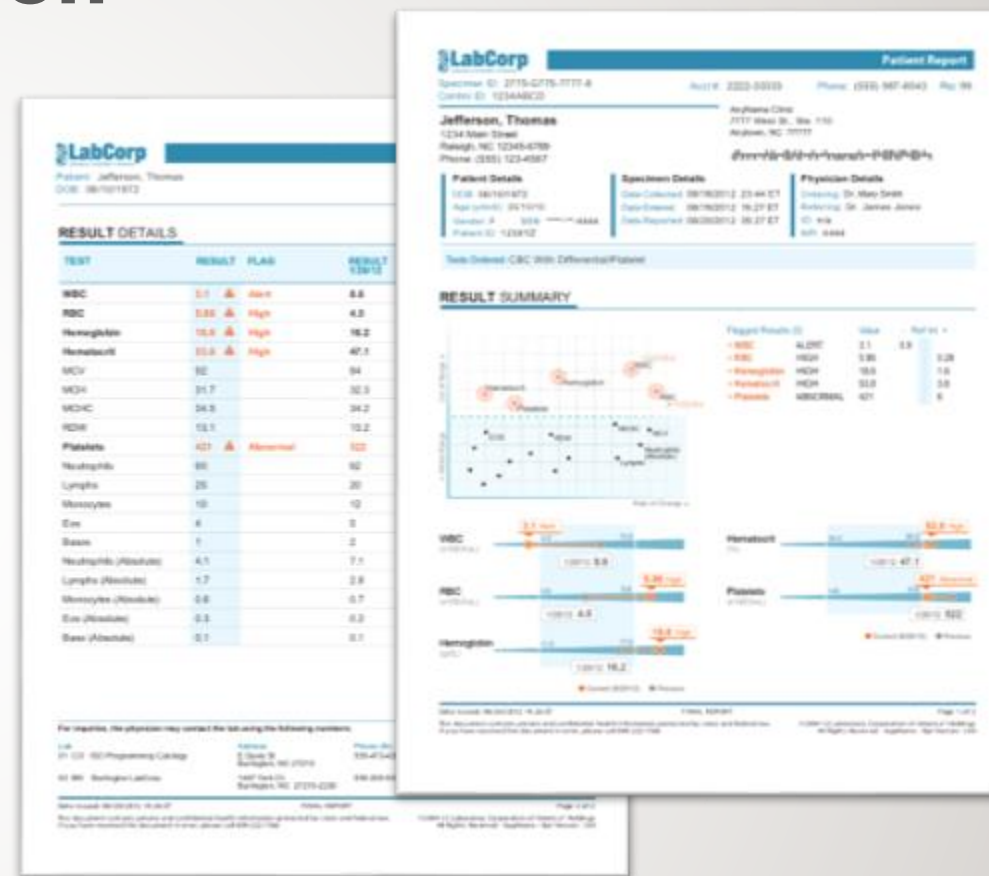
Quadrant sketches

# LabCorp Report Modernization

Final Designs



Tablet interface



Print Reports

# LabCorp Report Modernization

Results

## Outcomes

- Redesigned over 50 different reports
- Final print report incorporated both quadrant concepts and embedded historical data in the results
- Chunking data, changing label sizes, using blocks of color all helped massively to make reports easier to read and focus on critical results
- Adding historical data into a results display helped contextualize the information
- Printing software was a problem to take on new designs, and compromises had to be made
- Doctors had mixed results – clearly better visually, but they were resistant to change
- Interactive design held a lot more potential to explore data, but not enough business investment



# Optimal AskOT Interface

2008

## Overview

I was the lead UI designer for a small startup that was building an energy control device for the home. My task was to create the interface for the device. I worked with one other designer, but very closely with the Industrial Designer of the device, as well as the engineers and software developers.

## Problem

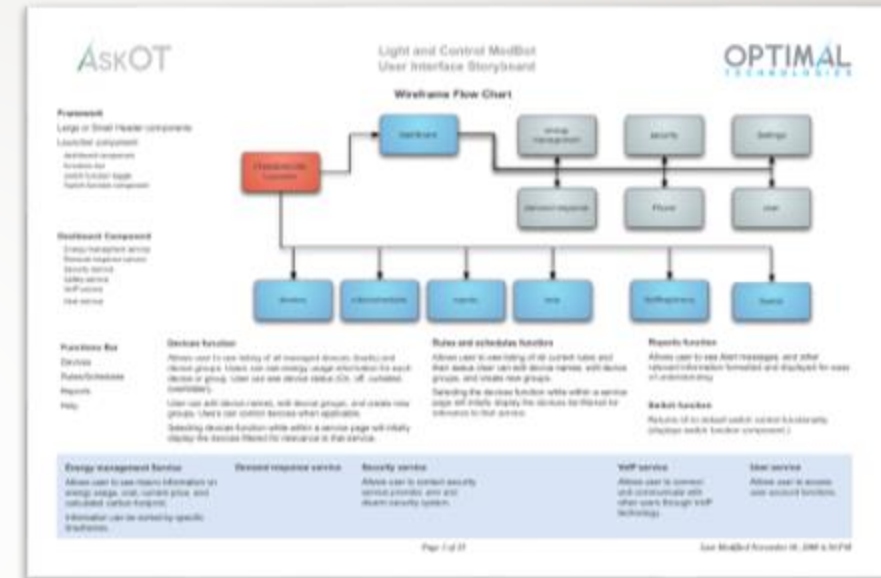
Original software was extremely confusing, based on a web application. Device was a small, tablet-like device using a touch interface. Functions were extremely complex and interconnected.



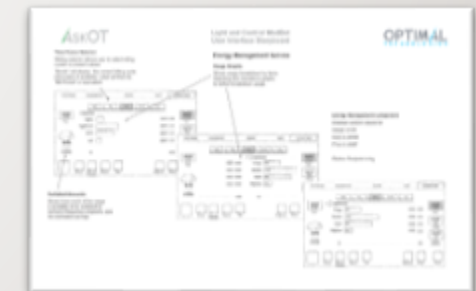
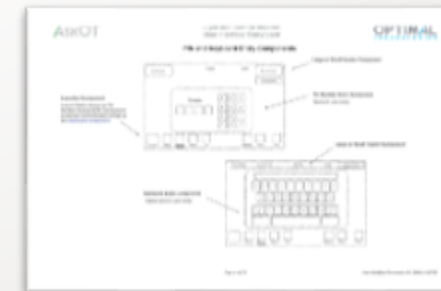
# Optimal AskOT Interface

## Early Designs

- First steps were to print out every screen from old interface to map out all functions and navigation (over 80 screens that took up 3 walls in my office)
- Navigation architecture was remade to combine similar functions and connect similar workflows together to support a more intuitive conceptual model of how the functions worked
- Challenging to design interface elements large enough to accommodate a finger input
- Wireframes were created to map out all interface elements
- Features were so complex (e.g., scheduling a device to respond to specific event rules, based on energy conditions), that only an interactive prototype could fully display the functionality



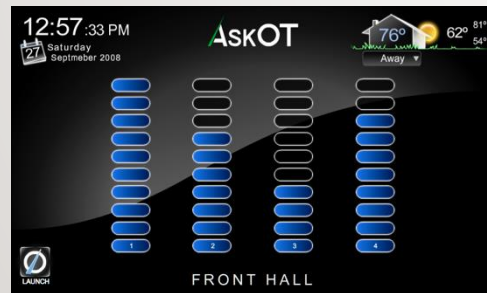
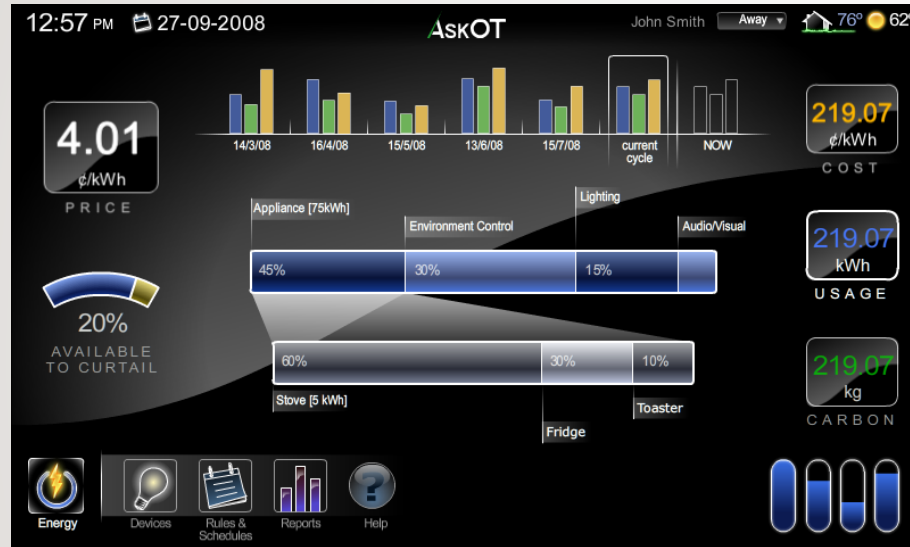
Navigational Architecture



Wireframes

# Optimal AskOT Interface

Final Design



Prototype Interface

# Optimal AskOT Interface

Results

## Outcomes

- Massive improvement from previous design; much more modern and more capable
- Very challenging designing for a touch tablet that was 4 years earlier than the iPad – common touch interaction patterns didn't exist
- Static wireframing could not adequately explain the highly interconnected workflows, but interactive prototype could
- As the design changed, the documentation did not keep up, which caused confusion
- Decisions were driven by industrial design, first, with the software experience having to accommodate it
- Needed user testing in the development process; device was tested with users, but the interface was not



Thank you!