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### Overview

I'd like to take you on a short journey to a world where keeping IT infrastructure of large organisations secure is no longer a difficult task. IT Admins and Chief Security Officers are constantly monitoring the health of the organisation's whole device estate and if it's not done right, it's easy to overlook critical issues. I accepted this great challenge with an interaction designer alongside myself to deliver the nextgeneration experience of security products within about 8 months.

The company was really keen on delivering a great experience so gave full support, listened carefully what we needed and provided as much information as they could to make this product a success. This was clearly a strategic design project so quick tactical solutions with only low-level operational UX activities were out of the question. This had to be a properly executed full end-to-end UX project.

# Challenges

As for the challenges, there were many, but the ones below stood out the most.

- This was the company's first security product so there wasn't much information readily available on users and all the context around them, which is absolutely essential in order to design effectively.
- Another big challenge was the sheer scale of data and information IT admins need to deal with. Large organisations often have hundreds of thousands of devices spread across multiple locations with millions of applications installed. Being able to spot and act on security issues in a timely manner is the backbone of the whole solution.

## Approach

I wanted to understand the company first, so I started by gathering company goals, mission statements, short and long-term goals, business objectives and project briefs. Why? Because UX is not only about making users happy, it's more about finding the best possible alignment between user needs and business objectives. Once familiar with the business, the context around users had to be dissected in order to ensure our solutions matched their expectations. Contextual interviews with users and key stakeholders were extremely important to learn about them, their roles, how they deal with security issues at the moment, what the biggest pain points are right now, how they share work with other people to mention a few important points. At the end of the discovery phase we had a clear picture of the business problem at hand as well as all about how users currently solve it and how they would see it solved.



This is a small extract from the discovery phase document with some key user roles.

The best design solutions are based on information coming from different people with different viewpoints about the business problem and users. Ideation workshops involving multiple people from different parts of the organisation often reveal extremely valuable information. These sessions sometimes go wild with messy whiteboards and hundreds of post-it notes at the end, but usually provides very powerful insights that must be captured. These insights are based on collaboratively ideating on solutions and building upon them. At this stage there are no bad ideas, quantity is rewarded over quality.



The ideation sessions brought some great ideas that we turned into multiple micro-solutions. These allowed for the creation of high-level concept interfaces, this time in a more consumable way.

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· Surger Security		Dashboard Alerts Ca		Balazs Michnay		
Alerts	Containing Modified Sort by Type to search Anytime V Newest	♥ ♥ High (2) ♥ Medium	(4) 🖌 Low (4)	Refresh Updated 2 arrivelja		
CVE-2010-t021 152 devices affected by	CRE-110 Cross-Site Request Forgery (CSRF)					
CVE-2010-0022 325 devices affected by	CRE119 Buffer overflow					
CVE-2010-0021 135 devices affected by	C0R-135 Untrusted search path valuerability					
CVB 2010 0024 545 devices affected by	CRE-N3: Cross site scripting (aka X35)					
CVE 2010-0025 5 devices affected by	Other vulnerability: issue cauld not be described with an available type at the time of analysis.					
CVE-2010-0026 2 devices affected by	(VI(=3) Problem due to file names with MS-DOS device names. (VIC-MI) Memory look advesnt firet memory when it shoulds use this instead of diss-release					
Showing 101-200 of 1875	( 1 (2) 3 18	>				







Concepts were then turned into prototypes that were tested with users. We sought to understand which solution made most sense to them so we could iterate those further. The visual navigation solution generated very good feedback so we came up with other ways how users could visually navigate across a huge database of devices.



After a few iterations of testing and refining, it was time for a high-fidelity version.

				Dashboard	Security posture			
Security posture				Affecting alerts (425)				
				CWE-190 CVE-20 Memory leak (doesn't free up memory when it should); use this instead of DOS release				
Filter by severity level 1	10		~	CWE-194 Cross-Site Request Fo	rgery	CVE-2010-0021 Affecting 424 devices		
				CWE-191 Memory leak (doesn't free up m it should): use this instead of DO		CVE-2010-0021 N Affecting 424 devices		
Products Org. Unit	Asia-Pacific			CWE-196 Problem due to file names with MS-DOS device names.				
	104 devices			CWE-194 Cross-Site Request Forgery		CVE-2010-0021 Affecting 424 devices		
				Devices (363)		Pick columns		
	Location			$\stackrel{\scriptscriptstyle \bigtriangleup}{_{\!$	$\stackrel{ riangle}{\bigtriangledown}$ OS	$\stackrel{ riangle}{\bigtriangledown}$ CPU		
EMEA 178 devices Device Type	Location	South		DEV106-SRV6	Windows 8.1	Intel Core i5 4460 3.20GHz		
		America 24 devices		GL.dev.ENG15	Windows 10	Intel Core i7-6700K 4GHz Socket		
	North			GL.dev.ENG18	Windows 8.1	Intel Core i7-6700K 4GHz Socket		
				GL.dev.ENG28	Windows 10	Intel Pentium Dual Core G3258		
				DEV106-SRV6	Windows 8.1	Intel Pentium Dual Core G3258		
				GL.dev.ENG15	Windows 8.1	Intel Core i5 4460 3.20GHz		
	America			GL.dev.ENG18	Windows 8.1	Intel Core i5 4460 3.20GHz		
	57 devices			GL.dev.ENG28	Windows 10	Intel Core i7-6700K 4GHz		
				DEV106-SRV6	Windows 8.1	Intel Core i7-6700K 4GHz		
				DEV106-SRV6	Windows 8.1	Intel Core i5 4460 3.20GHz		
				GL.dev.ENG15	Windows 10	Intel Core i7-6700K 4GHz Socket		
				GL.dev.ENG18	Windows 8.1	Intel Core i7-6700K 4GHz Socket		

Many organisations are still in a transitional phase when it comes to following a UX process for delivering software products. Building awareness around humancentered design and the ROI of having UXers around is our responsibility. Many divisions and teams sometimes struggle to understand how a UX team gets to a solution. Proper internal knowledge transfer and regular internal feedback sessions help deal with such issues. When our solution was firm, I delivered a presentation to key stakeholders and execs to clear up any doubts around hows and whys.



But design is never done! Technologies change, the way we interact with interfaces and devices change so we always need to be on the lookout for innovative solutions. This is why I implemented a conversational, virtual-reality interface for a more immersive experience and an interface that analyzes our facial expressions for automatic, proactive suggestions for actions.



### Results

Compared to other security tools on the market, this product gave complete situational awareness of the overall health of the device estate and allows for immediate, optionally bulk actioning on security issues with just a few interactions.

The company showcased the product at a number of shows and the feedback and reception was brilliant, the application proved to provide a very refreshing experience compared to other tools IT Admins use.