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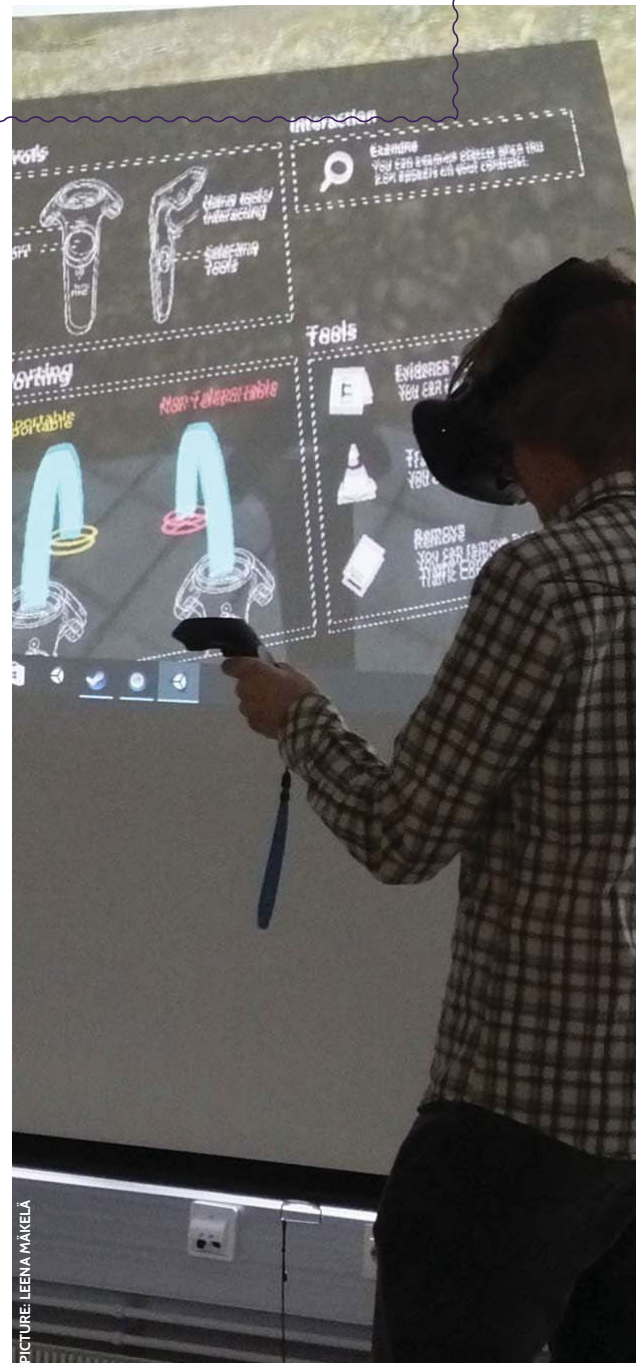
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ADAPTING GOOGLE DESIGN SPRINT FOR VR AND CREATING ONE WEEK MIRACLES

Kari Peltola

IN MAY 2017, A TAMK VIRTUAL REALITY (VR) sprint was organized at Mediapolis as a part of the MEDAIA project. Our goal was to find out whether we could transfer and adapt rapid innovation methods from the business environment to an academic setting. The experiment was a success, and we can warmly recommend adapting this approach to facilitate innovation, teach students and teachers highly applicable rapid prototyping skills, and build direct interfaces between students and companies, enabling students to get recruited faster.



PICTURE: LEENA MAKELA

TIMEBOX, MULTIDISCIPLINARY TEAMS AND REAL-LIFE CASES - A RECIPE FOR SUCCESS?

A sprint is a method of innovating inside a defined timebox. Time is used as a constraint that actually facilitates innovation and increases productivity. This approach creates a powerful natural incentive to learn how to make decisions effectively and how to focus on the key question at hand.

In the TAMK VR sprint, the basic idea was that real companies provided real-life challenges for the students to solve in multidisciplinary teams on a tight timeline of one week. We used the Google Ventures Design Sprint method as our baseline, adjusted it according to real life experiences and prototyping methods from a Finnish XR company Leonidas (full disclosure: I'm the CEO) and created a model for the school environment. Our goal was to find out whether this type of rapid prototyping method would be suitable to be implemented in the academic and VR technology contexts.

We had four teams of four students solving real cases for four companies. All cases were cutting-edge and provided real value for the companies:

- Testing and analysing eye-tracking VR HMD (head mounted device) technology
- Studying and creating solutions for interaction in a VR simulator environment
- Creating a prototype of a training tool for accident scene investigation
- Creating a method to direct user attention in VR

GOOGLE DESIGN SPRINT IN A NUTSHELL

The Google Design Sprint method was created in 2010, and is further developed continuously.

The method is explained by Jake Knapp, John Zeratsky, and Braden Kowitz in their book "Sprint: How to Solve Big Problems and Test New Ideas in Just Five Days" (2016). The sprint is divided into five phases that aim at answering a critical business problem especially in a product/service development context: **1)** map the problem, **2)** sketch the solutions, **3)** decide on the best solution, **4)** prototype and **5)** test and validate the solution. The method is built based on studies on over 300 different business strategies, design thinking processes, and user research methods, selecting the most effective ones for refinement. The framework supports both divergent and convergent thinking by combining creative brainstorming and sketching with rational and time-pressured prototype building. The sprint is carried out by a multidisciplinary team of 5-7 persons who act as project owners and work on the product under development. Anyone interested in running a Google Design Sprint can access the Google Design Sprint Kit online at <https://designsprintkit.appspot.com/>.



Source: Knapp, Zeratsky & Kowitz. (2016). *Sprint. How to solve big problems and test new ideas in just five days.*

Teams consisting of TAMK's Media and Information Systems students were multidisciplinary and had technical, visual and conceptual understanding. Our assumption was (and the sprint confirmed our beliefs) that it's essential to get the team composition right for them to be able to really implement a functional prototype. We used a matching game to build the teams and this proved to be an excellent method for the task.

FIVE DAYS TO FUNCTIONAL

The goal of the sprint method is to create a functional prototype that answers a critical question. For example: 'Is there a reasonably cheap way to bring a real-life manipulation device (i.e. joystick) into a VR environment' or 'What is the best method to direct users' attention to objects behind them in a VR context'.

The sprint week is structured in a way that allows the teams to find the critical question, create a solution, implement it and also test it with real users. In the TAMK VR Sprint, the week's overall structure was:

- **Monday:** What is the challenge?
- **Tuesday:** How are we going to solve this challenge?
- **Wednesday & Thursday:** Implementing the solution
- **Friday:** Morning: Testing the solution with real users and Afternoon: Presenting findings to the customer

WATCH A YOUTUBE VIDEO ABOUT THE FIVE-DAY SPRINT SHOT IN JUNE 2017:

<https://www.youtube.com/watch?v=wn4t3P3we6Q&feature=youtu.be>

WHAT WE LEARNED

The results were extraordinary. I've been doing rapid prototyping professionally for years now, and the students really exceeded my expectations. All the teams were able to implement a functional solution that could be tested and that offered valuable insight. Customer feedback was really good, and I had the feeling that the students were also enjoying themselves. In addition, we already know that thanks to the Sprint, some students were hired by the companies that provided the cases.

There are numerous positive aspects in the TAMK VR Sprint model. It seems to work as an effective interface between companies and students - students are able to show their know-how and motivation while solving real problems, making it easier for the companies to hire them. It teaches both the students and the facilitating teachers effective operation models and methods that companies are currently using. From the Finnish VR ecosystem perspective, it encourages both the companies and students to try out the VR technology, which is exactly what we need at this point. Therefore, I hope others will also learn from our experience and we'll see many more Sprints happening all around Finland in the future.

