As the year nears its end, it’s time for a new Tech Labs Newsletter. As always the Newsletter tries to give the reader an insight in some of the projects that are supported by the Tech Labs and present general information about new technology and future plans.

If you find any error or oversight in this Newsletter, please let me know and I’ll post an updated version on the Network Institute website (www.networkinstitute.org).

Do you have any questions about using technology in your classes or for your research, please do not hesitate to contact me. The Tech Labs are here to help you!

Marco Otte (m.otte@vu.nl), December 2014.

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Research

**Affective religious heritage - Biblical images and Crowd Sourcing**

This project will be using crowdsourcing to evaluate the emotional charge of early modern bible illustrations and will start in the beginning of 2015. The objective of the research is to develop insight in the growing importance of visual culture in the early modern period, especially within the field of bible illustrations and print bibles. To this end, the goal of this project is to design, develop and maintain a sustainable affective community around religious heritage.

The idea is to create a creative and compelling web site that incorporates crowd sourcing tools to keep audience involved with religious heritage and to obtain scientific knowledge through that environment.

The Tech Labs will participate in the project by advising about and possibly building the actual web site. The web application will provide the opportunity to read and browse comfortably through the images, and thus follow the narrative line of the bible books, while it also provides the opportunity to select certain images on the basis of the themes depicted and offering tools for comparison.

Users should be able to add metadata, make classifications of the affective value of the images and even be able to upload or link to reference material they deem relevant.

*Researchers: Johan Koppenol, Inger Leemans, Sebastien Valkenberg*

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**Exploring the Process of Workplace (indivi)dua Unlearning**

For this research the Game Cellال Lab was used to make video recordings of several groups of students performing tasks.

The research examines how members of a team interact when they receive a feedback that disconfirms their established understandings and skills. As a typical case, for example, how a project team react when the project manager says: “you basically had a wrong understanding of the project goals”.

To examine the unlearning process all the conversations of teams were captured from the moment that they receive negative feedback on a specific task that they performed, until the time that they repeated the same task for the second time. The video was captured of the behavior of the teams, their interactions, their engagements and body language during the process. To reduce the attention bias towards the videos, two
cameras were placed in each room in which several teams were working on their negative feedback. To account for the influence of video on teams behaviors, at the end of the experiment, participants were asked to answer two specific questions regarding the influence of video capturing: 1) “how long after the starting of the video capturing, did you still notice the cameras”? The dominant answer was almost after the first couple of minutes they forgot about the camera; 2) “when did you notice the presence of the video in this process, afterwards”: while many did not notice the cameras later in the process, almost one third indicated that they noticed the camera only when they finished the exercise at the end.

Researcher: M.H. Rezazade Mehrizi.

**Eliciting envy using a web-app**
Sometimes researchers basically want to use an on-line survey tool, like Qualtrics, but need one or more small tasks within the questions. Tools like Qualtrics however do not offer the functionality of inserting game-like features. Using a HTML5 and Javascript based development tool called Construct, the Tech Labs can build small web-based applications that can be integrated into Qualtrics so that a participant does not have to switch between the survey and the application.

To study the effects of envy, Jeanna Frost (FSW), wanted exactly that. She needed a small gambling game inside her survey. This was a computer-based gamble game. The goal of the game is create a feeling of envy. In this “game” a participant should feel like they are playing a real other person either at the same time. However, in reality, the participant is the only person playing. The game consists of practice rounds and ten experimental rounds. During both the practice and actual rounds, the participant gambles money and either loses or wins. Depending on the condition, a participant would see their virtual opponent win more or less money then they did.

Researcher: Jeanna Frost (FSW)
Perception of Healthcare Robots
During April/May, and experiment ran in the Game Cellal’ Lab aimed at testing whether (and how) people’s prior emotions affected their perceptions of a robot that could be used in the field of healthcare. To be able to test this, people had to interact with a robot during the experiment. The Robokind robot Alice from the Tech Labs is a robot that allows complex and detailed facial expressions and was ideal for this experiment. Because a large number of participants had to interact with Alice in a short amount of time, there were some concerns that the robot wouldn’t be able to cope mechanically. Therefore, the interaction was ‘faked’ via video clips. The intention was to have Alice ask some questions about the participants’ wellbeing, so prior to the experiment Alice was filmed and asked each of these questions. These short clips were then inserted into a Qualtrics questionnaire.
When the experiment started, participants were seated individually at one of the 5 computers in the Game Cellal’ Lab. To visually separate the participants, large divider screens were used to create cubicle-like places, and headphones were used so the participants would be able to hear Alice correctly and wouldn’t bother other participants during the interaction with Alice.
*Researcher: Marloes Spekman*

Horizon 2020 – USIRA proposal
Already in it’s preliminary phase, the USIRA proposal is a response to the specific challenge set out in the call ISIB-03-2015 “Unlocking the growth potential of rural areas through enhanced governance and social innovation”. USIRA main objective is to understand what are the drivers and enablers of successful social innovations under different conditions in rural areas. How they promote growth, social cohesion, economic competitiveness respecting the environment, participation in decision-making processes and community empowerment. USIRA intends to understand how social innovations can develop and be framed in different rural geographic contexts. To do so the Tech Labs are asked to participate in this project and to advise about, develop, build and maintain a database and repository that will hold all the collected data for further application within and without the USIRA project.
The data will be collected in 30 study areas spread out over 23 countries across the project four geographical regions. This means that access to the database and ease of use will be paramount next to a high level of quality of the data. Using this collected data researcher will formulate research questions that will guide the empirical work of the remainder of the USIRA project. During 2015 that final proposal will be submitted and we will know if it will be granted.

Researchers: Sabina Di Prima, Denyse Snelder

Virtual Burglary
Last May the very first study using the Burglary virtual environment (see Newsletter Spring 2013) that is being developed in the Tech Labs, was conducted in the Game Cellar’ Lab. The setup used a normal computer monitor and the environment contained one accessible house in which dozens of items were placed that could be taken or looted. The research goal was to examine whether and to what extent certain personality factors that have been related to the choice for crime would also influence behavior within the criminal event. Specifically, we were interested in sensation seeking, low emotionality and low integrity and to determine the workability of the virtual environment.

It was predicted that sensation seekers would spend more time in the virtual environment. People low in emotionality would spend more time in the virtual environment. People low in Honesty-Humility/integrity would be “better” burglars in the sense that these individuals are attuned to spotting opportunities for personal gain. Unfortunately no empirical support for any of these hypotheses was found, but the virtual environment worked without any glitches.

In December a second study using the same, although slightly upgraded, virtual environment was started from the Faculty of Psychology in collaboration with the NSCR. It asks the question: “Are there aspects of your personality that may make you a better thief?”

The premise is the same as with the previous experiment, but in this case an additional realistic feature was added: as in real life, participants may get caught and lose their earnings. To see how one’s personality might affect their behavior as a thief in light of this risk, researchers will be taking heart rate measurements of the participants, as well as analyzing responses to personality questionnaires. Do certain types of people have a better idea where valuable items are kept? What are the most commonly burgled areas of our houses? Will certain personalities perform better under pressure, such as when a loud alarm is sounding? Will sensation seekers have more relaxed heart rates under the pressure of being caught?
Apart from some upgrades in the environment, the main difference in technology between this second study and the first is the use of head-mounted-displays. In this case the Oculus Rift Development Kit 2 (DK2). Since the DK2 has a much higher resolution and somewhat faster response characteristics, this HMD is finally usable for experimental use. We expect this second study to run through the month of January.

Researchers: Jean-Louis van Gelder (NSCR), Jan Willem van Prooijen, Andrew Demetriou, Iris van Sintemaartensdijk

Information sharing as strategic behavior
With all the information technologies ‘out there’ it’s definitely easier to share information with others. Organizations increasingly invest in new media to stimulate information sharing among employees. However, whether or not a piece of information is shared comes down to such things as people’s motivations and it’s also a function of the attributions of the information (e.g., public, private, important, unimportant).

Previous research showed that information sharing is strategic behavior affected by social motives: pro-socials share the important private information while pro-selfs share the unimportant public information just to make a cooperative impression; pro-selfs even lie about and distort their private important information.

The first aim of this experiment is to explore how power affect information sharing. We focus on power because it is commonly perceived in organizations as the opportunity to achieve one’s goals. However a different power construal may shift the focus on more social, more responsible aspects of sharing.

Secondly, we also manipulated ability feedback based on a task the participants performed.

This experiment extend research on strategic information sharing and is part of the larger Eurostars project INFUSE that aims to develop an innovative search and information service to reduce time and effort organizations spend on disclosing funding opportunities.
To conduct this experiment the Tech Labs’s MediaLab was used.

*Researchers: Nicoleta Bălău, Sonja Utz (KMRC, Germany)*

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**Miscellaneous News**

*Presentation KNAW*

In March of this year Sally Wyatt of the KNAW eHumanities group, invited the Tech Labs to present the Tech Labs facilities and talk about possibilities of KNAW researchers to use the Tech Labs.

*NU.VU: inrichting en overleg UB*

In the beginning of this year the Tech Labs, and the Computer Science department of FEW, had intensive talks with the project team of the NU.VU building. To ensure the Tech Labs of the VU and the UvA Informatics departments, of which the Network Institute are a part, we decided on placing one of the labs on the first floor and to create a new version of the Intertain Lab, the Iconic Lab. In collaboration with the University Library (UB) this new high-end and attractive lab will play a major role in connecting students, researchers, visitors and state-of-the-art technology.

The other Tech Labs will find their place as a research lab cluster on the sixth or seventh floor. This way we will profit from proximity and easy access and maintenance of all the Tech Labs.

Over the course of 2015 the position of the Tech Labs will be made definitive and we will start designing how the new Tech Labs will look and what features and functionality they will have.
Field Trip LI
For the second year in a row, the Tech Labs helped organize and run the first year Lifestyle Informatics students. Each year the students have two full days in which they have hands-on experience with hard- and software. Using Arduino’s and a large set of sensors and actuator and tables full of random items from the IKEA and the Praxis, they need to come up with a Lifestyle Informatics solution that would actually be workable and usable in today’s society.
For many of the students it is the first time they use electronic devices and write programming code.
As last year, this year was a big success. On the final day the students presented a host of interesting systems to solve issues we run into each day. Each group also succeeded in building a mock-up that really worked using the Arduino’s.

Investments
Towards the end of the year, we were able to invest some of the budget in new hard- and software for the Tech Labs. It is the aim to not only specifically help researchers and teachers by supplying them with equipment, advise and custom-made hard- and software, but also to serve as a show case for the latest consumer and professional equipment. This allows people interested in using technology in research and education to get a feel of what “is out there”.
A quick look into some of the new “stuff” that’s available now or soon at the Tech Labs:

- Samsung Galaxy S5 smart phones
- Samsung Gear2 watches
- Samsung Gear Fit sporting wristbands
- Apple iPhone 6(+) smartphones
- Apple Watches (Q1 2015)
- Estimotes beacons and stickers
- Oculus Rift DK2
- LeapFrog 3D printer (new version, Q1 2015)
- Philips Hue lighting system
- BioSignalPLUX biosensor kits
- Emotiv Epoc EEG
- Virtuix Omni static treadmill (Q1 2015)
- Prio VR full-body motion capture (Q1 2015)