Augmented Reality for MIS

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Technology and Code

This project uses Unity3D version 5.1.0f3 and Vuforia SDK version 4.2.3. Adding the teapots was mostly drag and drop in Unity. The setup of the scene was also very easy. The interesting part was getting dynamic data from the web, which is something Unity3D is not necessarily meant for, at least not in this context.
Three supporting C#-scripts do the job. WebContentImage.cs allows to load an image from the web and place it within the scene. It uses Unitys WWW-class, that allows loading data from any source outside of the project (e.g. local folders, web servers). The class allows to use the data in different ways, e.g. as texture. The scripts WebContentPersonInfo.cs and WebContentFunctionInfo both use WWW to read the HTML-code of a given web-page and "parse" it to gain the displayed information (Unity has no HTML-functionality, so we are ripping the web code by hand). The code is written to work with any person-page from the BISON portal. This would allow us to easily add any person to the system as long as there is an image somewhere and a BISON page. The text is rendered using a Unity TextMesh, actually two per person. This allows easier placement of the text and different font sizes.
The targets are photos taken by smartphone. The basic images had poor quality when uploaded (0-2 stars). After manually changing them to grayscale and improving contrast the images got better ratings (4-5 stars). The real-world tracking worked rather fine in our tests as well as simply putting the source photo on a notebook screen.

Who is on the list?

The decision who is on the list was simply taken by taking a look at the personal page of the faculty media and a quick run through B11. The target for each person is the room number sign close to the door of each room. The following persons are currently supported by the app with the following data sources:

Benno Stein
http://www.uni-weimar.de/uploads/pics/stein_web.jpg
http://www.uni-weimar.de/qisserver/rds;jsessionid=80313E57559EC2BD0F00F7776274A677?state=verpublish&status=init&vmfile=no&moduleCall=webInfo&publishConfFile=webInfoPerson&publishSubDir=personal&keep=y&personal.pid=2787

Bernd Fröhlich
http://www.uni-weimar.de/uploads/pics/froehlich_web2.jpg
http://www.uni-weimar.de/qisserver/rds?state=verpublish&status=init&vmfile=no&moduleCall=webInfo&publishConfFile=webInfoPerson&publishSubDir=personal&keep=y&personal.pid=1303

Eva Hornecker
http://www.uni-weimar.de/uploads/pics/hornecker_web.jpg
https://www.uni-weimar.de/qisserver/rds?state=verpublish&status=init&vmfile=no&moduleCall=webInfo&publishConfFile=webInfoPerson&publishSubDir=personal&keep=y&personal.pid=6574

Florian Echtler
http://www.uni-weimar.de/uploads/pics/echtler_web.jpg
http://www.uni-weimar.de/qisserver/rds?
state=verpublish&status=init&vmfile=no&moduleCall=webInfo&publishConfFile=webInfoPerson
&publishSubDir=personal&keep=y&personal.pid=7095

Matthias Hagen
http://www.uni-weimar.de/uploads/pics/hagen_web.jpg
http://www.uni-weimar.de/qisserver/rds?
state=verpublish&status=init&vmfile=no&moduleCall=webInfo&publishConfFile=webInfoPerson
&publishSubDir=personal&keep=y&purge=y&personal.pid=4552

Nadin Glaser
http://www.uni-weimar.de/medien/webis/people/glaser.jpg
http://www.uni-weimar.de/qisserver/rds;jsessionid=6AD20E4C1C227AF65ADDDB92F3338EF5?
state=verpublish&status=init&vmfile=no&moduleCall=webInfo&publishConfFile=webInfoPerson
&publishSubDir=personal&keep=y&purge=y&personal.pid=5465

Stefan Lucks
http://www.uni-weimar.de/uploads/pics/lucks_web.jpg
https://www.uni-weimar.de/qisserver/rds?
state=verpublish&status=init&vmfile=no&moduleCall=webInfo&publishConfFile=webInfoPerson
&publishSubDir=personal&keep=y&personal.pid=3804