With the 2015 UK Election campaign at full speed, improving how voters engage with televised election debates is as relevant as it gets. That is precisely the goal of the Election Debate Visualisation (EDV) project. On 2 April seven party leaders clashed in the ITV Leaders’ Debate viewed by 7 million people across the UK. EDV used Democratic Reflection, a new mobile web app, to allow over 300 viewers to reflect on the leaders’ performances. The app is available online and made it possible for viewers of the BBC Challengers’ Debate on 16 April to provide instant feedback on what they experienced, this was accessed by over 2000 users before and during this debate.

Technology enhanced democratic reflection

On 2 April seven party leaders clashed in the ITV Leaders’ Debate viewed by 7 million people across the UK. EDV, used Democratic Reflection, a new mobile web app, to allow over 300 viewers to reflect on the leaders’ performances. Indeed, the app (available online) also made it possible for viewers of the 16 April BBC Challengers’ Debate to provide instant feedback on what they experience.

What is EDV’s Democratic Reflection? - A new way to share your reactions about the live election debates

This web app, developed in partnership with researchers in Political Communications and Design from the University of Leeds, allows viewers to give live feedback on key political events such as these televised election debates through their laptops, tablets or mobile phones. Viewers can express their thoughts and feelings by using digital cards which capture
different reflective statements. They can say – for instance – ‘I’m losing interest’, ‘S/he hasn’t provided convincing evidence for this claim’, ‘S/he’s speaking up for people like me’ and so on. What’s more, viewers can also watch the live feed of reactions from other users interacting with the tool.

“I could see other people’s opinions popping up, and so it made me feel like we were all part of this; we’re all watching this together.”

But there’s more to EDV’s work than encouraging viewers to give their feedback to the debate – the Democratic Replay website allows viewers to re-watch an election debate after it has taken place, enhanced with interactive visualisations and analytics showing such things as: interruptions, attacks, unanswered questions and other failures to comply with the debate rules; how the debaters arguments relate to each other; facts versus speculation; and aggregates of viewers’ reactions.

Political leaders are used to trading metaphorical blows, citing often conflicting figures, and skilfully avoiding inconvenient issues. When the same thing happens during an election debate it alienates many viewers. This is where EDV’s Democratic Replay website comes into play as a way of helping citizens make sense of complex political argumentation and scrutinise potentially confusing communication strategies as they replay TV election debates. EDV can also highlight patterns of citizens’ reactions and needs, and provide instant analysis over the debate, with methods that are free and open to all.

Engage in Democratic Reflection

Democratic Reflection is easy to use and is compatible with a range of mobile devices.

When you use the tool you’re offered twenty coloured digital cards, each of which includes a reaction that you might want to express as you watch a TV election debate. You can select

Anna De Liddo
Research Fellow

Anna is one our Research Associates here at KMi with a background in Urban Planning and Design. Her research focuses on technological infrastructure for social awareness and citizen engagement pertaining to policy and decision-making. Her particular interest lies in knowledge construction through discourse, and the role of technology in scaffolding dialogue and argumentation in contested domains. Anna is currently leading The Open University’s work in the European Research Project CATALYST, which aims to develop collective applied intelligence and analytics for social innovation.

For the EDV project, Anna is looking at the role technology can play during political discourse; testing at models that can assist viewers in building their knowledge of the issues discussed.

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any statement that expresses what you’re thinking by clicking on the card on your laptop or touching the card on your tablet or mobile phone.

In contrast to “the Worm” and other polling techniques, we are not trying to find out which party or leader people support or who they think are winning and losing. Instead we’d like to capture viewers reactions along finer-grained, nuanced dimensions related to democratic citizenship by letting them choose which of the statements during the debate.

**Why social media in politics?**

Even though social media is thoroughly embedded in voters’ culture we have yet to come up with an engaging, interactive way to share our feedback on election debates, but perhaps all that is about to change.

When the first televised debates took place ahead of the 2010 General Election, research identified a public appetite for understanding more about the political parties and their policies, but discovered viewers were often left feeling disengaged. In the first of two televised debates between candidates for this year’s General Election on 7th May you could be forgiven for feeling disconnected with your fellow voters. The audience feedback available from following #ElectionDebate on Twitter, although occasionally amusing, arguably didn’t really provide a high quality insight into the public’s reaction to the arguments being made. Some users also found that they were quickly being spammed by tweets from political parties giving their own feedback to the speakers’ performances.

Once the debate was finished, it was over to the BBC to analyse the public’s reaction using “the Worm”, which shows quantitative rather than qualitative data and does not provide the split of negative and positive feedback in discernible detail. Alternatively the EDV’s Democratic Reflection app, available on laptops, tablets and mobile devices, aims to capture viewers’ views and feelings and use this to build a richer understanding of our democratic needs, engagement and reflections on the political debate.

*The Election Debate Visualisation (EDV) project is funded by the UK Engineering and Physical Sciences Research Council. The EDV team at KMi gratefully acknowledges their project partners from the University of Leeds (UK): Prof Stephen Coleman (PI), Dr Giles Moss and Dr Paul Wilson.

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Brian Pluss
Research Associate

Brian is currently working on the Election Debate Visualisation (EDV) project, using technology to gauge the opinions of the electorate during this year of crucial political debate. His work particularly focuses on analysing the lack of cooperation in dialogues such as political interviews and election.

Harriett Cornish
Graphic Designer

Harriett is our in-house Graphic Designer at KMi. As part of the EDV project she assisted in developing the Democratic Reflection interface, which entailed designing the visuals for a laptop view and a tablet view.

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And in other news...

**FORGE**

**Wins Hottest Pitch at Netfutures 15**

NetFutures is the main event for EU research and innovation under DG Connect and had over 1,000 attendees this year. The main event was opened by Commissioner Guenther H. Oettinger, followed by Arnis Daugulis, Deputy Secretary of State for Latvia and Sara Mazur, Vice President and Head of Research, Ericsson. During this opening session the official documentation launching the Alliance on Internet of Things Innovation (AIoTI), a high profile EU industrial initiative, was signed by the Commissioner and board members of Bosch, Philips and Sigfox.

FORGE was heavily involved in the event. The FORGE methodology and infrastructure for supporting educational ecosystems around Future Internet Research and Experimentation (FIRE) facilities was presented in two preceding workshops. We were also present in an invitation only FIRE/GEANT meeting. GEANT is the pan-European research and education network that interconnects Europe’s National Research and Education Networks (NREns), connecting over 50 million users at 10,000 institutions across Europe and operating at speeds of up to 500Gbps. During the FIRE Board meeting a FIRE Steering Group was established to oversee, generate and execute a plan for the long term sustainability of FIRE facilities and testbeds. John Domingue was seconded to this body due to his expertise associated with educational ecosystems and setting up and leading networking research institutions.

One of the highlights of the conference was the Perfect Pitch Panel where eight projects, each selected by the head of their home unit, competed against each other in terms of market readiness and take-up and overall economic and societal impact. Within this session John Domingue gave a live demo of the FORGE iBook including the on-the-fly creation of a simulated internet on a shared area running on a KMi server and setting up and running internet experiments on iMinds w-iLab.t test facility running in Ghent.

The first demo is part of a collaboration between KMi and Cisco where we are extending their Packet Tracer software which is used to train over 1 million network engineers globally each year. To keep the crowd entertained (the event ran from 5-7pm) a live band played during the breaks and a live cartoonist was employed (see figure). We were very happy to have been officially awarded the ‘Hottest Pitch’ prize which was presented by Mario Campolargo, the Net Futures Director.

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KMi hits LAK15

A group of KMiers attended the 5th ACM Learning Analytics and Knowledge (LAK) conference, this year held in Poughkeepsie, New York.

Zdenek Zdrahal, Martin Hlosta, and Jakub Kuzilek were attending to present work on OU Analyse, which as well as attracting interest from participants was highlighted in OU PVC for Learning and Teaching, Prof Belinda Tynan’s keynote talk on the Thursday.

Duygu Simsek was presenting her PhD work on the Xerox Incremental Parser (XIP) and Simon Buckingham Shum his work on epistemic-commitments in information seeking tasks. Simon also co-organised a workshop on the Temporal Analysis of Learning Data - It’s About Time - proceedings pieces for the short paper and workshop are on ORO.

Beyond KMi (and of course, ex-KMi-er Simon) the OU was very well represented, with (Best Paper Award recipient) Sharon Slade from the Business School; Bart Rienties, Rebecca Ferguson, and Denise Whitelock all from IET; and head of Analytics Kevin Mayles with PVC Belinda Tynan. This year’s conference included a number of talks considering both institutional issues in developing analytics strategies, and research around discourse-centric learning analytics: both areas well represented by the OU.

Augmenting your work
(at MIT media labs)

At the beginning of March the chair of the IEEE standards association working group on Augmented Reality Learning Experience Models, KMi’s own Fridolin Wild, presented the vision and working plan, while also kicking off the initial use case collection. Hosted by the MIT media labs in Cambridge, Massachusetts, the AR community meeting brought together the global experts in the field, also with representatives of working groups in other standards organisations such as Khronos, OGC, Oasis, Mipi, W3C. A report about the use cases collected will be made available.
New Director-designate, John Domingue

We’re pleased to announce that Professor John Domingue has been appointed as KMi’s 4th Director since its founding in 1995. John will be taking up his post in August this year, when the current Director steps down.

Professor Domingue is one of KMi’s early pioneers, having joined the lab when it was set up twenty years ago. He arrived at The Open University in 1983 and was supervised by KMi’s founder Marc Eisenstadt, and has already been acting as Deputy Director for many years. “Having worked in KMi since it was conceived I have seen the lab go from strength to strength under the leadership of its three Directors. I am really looking forward to taking on this role and leading KMi in this very exciting time of Big Data and Data Science, further enhancing the OU’s signature reputation in the Knowledge Media domain.”

After twenty years of service to The Open University, KMi’s 3rd Director, Professor Peter Scott will be moving on to shores new in Australia this summer - to become Assistant Deputy Vice Chancellor at the University of Technology, Sydney. Lifting a glass of Champagne for John’s appointment, Professor Scott said “We have much to celebrate in the success of knowledge media research over these last 20 years, but yet more exciting is the new generation of KMi researchers that John will lead. I am proud to have helped create that knowledge media future”.

The European Data Science Academy kicks off!

The kick-off meeting of the European Data Science Academy (EDSA) took place in Luxembourg. EDSA is a flagship project for the EC with regards to bridging the gap in the demands for data science skills in Europe. Apart from the project partners, the meeting was attended by the Project Officer for EDSA Carola Carstens; the Head of Unit Data Value Chain DG Connect, Marta Nagy-Rothengass; the Deputy Head Unit Data Value Chain DG Connect, Beatrice Covassi; as well as via teleconference from Brussels Heidi Cigan, Policy Analyst DG Communications Networks, Content, Technology Unit F4 European Semester and Knowledge Base. The EDSA project will establish a virtuous learning production cycle whereby we: a) analyse the required sector specific skillsets for data analysts across the main industrial sectors in Europe; b) develop modular and adaptable data science curricula to meet these needs; and c) deliver training supported by multi-platform and multilingual learning resources based on our curricula. The curricula and learning resources will be continuously evaluated by pedagogical and data science experts during both development and deployment.

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The project has a duration of three years and is coordinated by Professor John Domingue here in KMi.

The project consortium consists of 9 partners from 6 European countries (UK, Germany, Sweden, Slovenia, The Netherlands and France). Partners represent universities (OU, KTH, SOUTHAMPTON, TU/e), research institutions (FRAUNHOFER, JSI) and SMEs (ODI, IDEXLAB SAS, Persontyle Limited) covering different forms of organisations.

Successful collaboration with OU of China

This month we said farewell to Zhou Rui who came to visit KMi for several months from Anhui Radio and TV University, China. Zhou came over from his home faculty of Educational Technology to work on OU Analyse. His research interests, which include data mining and data analysis, meant that he provided useful support for the OU Analyse team. We hope this may be the beginning of a strong collaborative relationship with Zhou’s institution and we look forward to keeping in touch.

Top Tweet from Cisco

“Exciting Packet Tracer widget developments” is what Nuno Guarda, Head of Corporate Affairs for Cisco in the UK and Ireland, tweeted yesterday after a very successful event held at The Open University. Alexander Mikroyannidis and Aitor Gomez-Goiri (Knowledge Media Institute - KMi, The OU) presented their latest work on rich interactive learning materials, featuring the development of an HTML5 widget, which is based on Cisco’s Packet Tracer. Packet Tracer is a network simulation tool used by millions of Cisco’s Networking Academy students worldwide. In collaboration with Andrew Smith (Faculty of Mathematics Computing and Technology, The OU), KMi is building a web interface of Cisco’s software in order to integrate Packet Tracer in a variety of learning activities within online courses and interactive eBooks.

This work is funded by the EU project FORGE (Forging Online Education through FIRE). The event was organised jointly by CompTIA, Cisco and The Open University and was entitled “Delivering Industry Education within Academic Programmes”. It featured several stimulating talks from Nuno Guarda, Andrew Smith, Monica Grady (The Open University), James Stanger (CompTIA) and Hannah Robertson (Pearson Education).
PhD Student Highlights

KMi is pleased to announce two new PhD awards. Drs Hassan Saif and Petr Knoth both passed their viva exams on exactly the same day! Let’s take a closer look:

**Dr Hassan Saif**

Social media platforms like Twitter and Facebook are considered among the most popular forms of online communication, much of their information reflecting people’s opinions and attitudes is published and shared on a daily basis. This has recently brought great opportunities to organisations and policy makers interested in tracking or monitoring the reputation of their brand, their business and assessment of public opinion about their policies or political issues. Most existing approaches to opinion mining and sentiment analysis on Microblogs rely mainly on the presence of affect words that explicitly and unambiguously reflect sentiment like ‘great’ or ‘terrible’. However, the sentiment of words, in many cases, is associated with their semantics, either via context eg. ‘great’ is negative in the context “pain” - or the conceptual meaning associated with the words (e.g. “Ebola” is negative when its associated semantic concept is “Virus”). So, ignoring the semantics of words when calculating their sentiment may lead to inaccuracies. Hassan’s research investigated the role of words’ semantics in sentiment analysis of microblogs and demonstrated the value of using semantics in sentiment analysis on Twitter.

Hassan remains in KMi as researcher on the ‘SENSE4US’ EU project developing an integrated tool for public services and policy provision using policy modelling, simulation, data analytics and social network data.

**Dr Petr Knoth**

Petr’s thesis ‘Linking Textual Resources to Support Information Discovery’ explores the vast amounts of textual data, from different sources and of different types stored online.

Petr’s work addresses the complex idea of how no single document, piece of work or snippet of knowledge stands in isolation or can paint a complete picture. His work seeks to assess, compare, contrast and analyse multiple documents to leverage the relationships between them. Petr’s thesis studies how people link content; investigates the properties of different link types; presents new methods for automatic link discovery between textual data and designs a system to link discovery; and designs a system in which link discovery is applied on a collection of documents to improve access to public knowledge.

Petr has continued to work on the same theme throughout the evolution of the CORE project since 2010, in his thesis and beyond. He is now working on making it possible for people outside an academic world to access texts and allow the processing of this data by machines,

Petr’s work continues with the UK Aggregation projects which have been supported by UK’s JISC.
What we are writing: in the spotlight
Dr Carlos Pedrinaci

Gkotsis, G., Liakata, M., Pedrinaci, C., Stepanyan, K. and Domingue, J.

The first paper describes AcQUA, a free online service offered as a Web browser plugin which helps users automatically identify the most promising answers from Question Answering websites. While the tool has focused on StackExchange.com, the most popular family of Question Answering sites, the intelligent algorithm underlying AcQUA can successfully be applied to other communities and forums regardless of their topic on interest, may it be technical issues or general concerns such as DIY or brewing beer. Many question answering sites use a voting mechanism to help users filter out the best answers. The main novelty and advance brought by AcQUA is that it focuses solely on textual and linguistic features of the answers, such as the quality or length of the text, in order to determine how promising the answer is. This novel approach gives users world class predictions, while it ensures that it can be used in a greater range of online communities than existing approaches, allowing users to save time and focus on the best answers emerging from online communities.


The second paper focuses on an open source integrated semantic web service discovery and composition tool aimed at software developers to help them create applications. Many developers, as a starting point for creation, will look for existing software and services online, which can be re-used and then extended. The system discussed in this paper uses Artificial Intelligence techniques when searching the Web, to understand what existing apps and services do, and to assess their compatibility before offering them as solutions to developers as a starting point for a new app.

One major contribution of this work concerns its scalability and performance which allows users to search and combine thousands of online services into complex applications in a matter of milliseconds.
KMi's World Stage and Closer to Home

John Domingue, Alex Mikroyannidis and Aneta Tumilowicz were in Luxembourg for the EDSA kick-off meeting.

Zdenek Zhrahal, and many other KMiers joined the LAK15 in Poughkeepsie, USA (16-20 March) for papers and workshops.

Michelle Bachler and Catalyst team, joined a meeting for the Catalyst project in Rome (9-15 March).

Fridolin Wild and Beppe Scavo travelled to Boston for an AR community meeting 21-27 March 15; and to discuss standards.

Miriam Fernandez joined a meeting for the DecarboNet project in Vienna, Austria (14-19 March).

KM teaching award!

Kevin Quick, Jon Linney & Chris Valentine received an OU Teaching Award at the Charter on 23 April 2015.

The Faculty of Social Sciences launched Student Connections in May 2014 in order to bring OU students and academics together into a live online community.

Participants could engage remotely in the live event via our Stadium2 interactive webcast service. Apart from HD video streaming, student could use social tools such as live chat & interactive widgets built by Kevin Quick and Jon Linney. Most popular was the interactive ‘Deans Quiz’.

KM Future

Upcoming Knowledge Media Events...

- Several KMiers, including Harith Alani and Carlos Pedrinaci are attending the International WWW2015 Conference in Florence (18-22 May 2015)

- Fridolin Wild is attending the Augmented Work Expo (AWE) 2015 in Santa Clara, California (8-10 June 2015).

Coming NEXT - The Future of Knowledge Media...

May 20th we are celebrating 20 years of Knowledge Media here at The Open University’s Milton Keynes Campus.

http://kmi.open.ac.uk/20

The event will be opened by the OU’s new Vice Chancellor, Peter Horrocks who will introduce a series of talks and panel debates with prominent luminaries including Sir John Daniel and Professors Marcus Specht & Frank van Harmelen.