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Contents

Editor's Note

Welcome to Volume 16, issue 1 2019 of UKeiG's journal eLucidate. I'd like to thank the information professionals and experts who consistently contribute a diverse range of absorbing and informative topics to every issue. Please keep the articles and reports coming. They are the lifeblood of this publication.

The UKeiG Members' Day, held at CILIP HQ on Friday 7th June 2019, showcased three such experts: Michael Upshall (UNSILO), David Haynes (City, University of London) and Dr. Tony Russell-Rose (UXLabs, 2dSearch.) The event explored the impact of artificial intelligence on the knowledge, information management and library profession. Upshall kicked off the event by throwing down a gauntlet. Were taxonomies still relevant in an age when AI was transforming search by enabling concept clustering and semantic enrichment? Manual classification schemes, vocabularies, taxonomies and ontologies have always played an essential role in information retrieval but Upshall argues that they are expensive and fundamentally flawed; reactive not proactive. "They will never be complete. They will never be large enough." Haynes went on to explore the potential impact of AI on the information resource management cycle, leaving Russell-Rose to deliver an illuminating crash course on the linguistic phenomena that make natural language processing (NLP) such a complex and multi-faceted field of research. "Language is ambiguous," he said, "and the key tenet of NLP is resolving that ambiguity." There was a consensus amongst the delegates that there are huge challenges and opportunities ahead for the LIS profession; that information science is fundamental to AI.

Martin White, Managing Director of Intranet Focus Ltd, issued another challenge. Is Microsoft's domination of the delivery of desktop information management tools inhibiting effective enterprise-wide information management? Is our "monolithic adoption" of applications like Office 365's Teams (barely out of beta) cramping our creative, strategic style? Are our IT departments wed to convenient Microsoft solutions that are not relevant to organisational requirements? A fascinating read.

It's an honour to feature Stella Dextre Clarke in this issue. She is a past winner of UKeiG's prestigious Tony Kent Strix Award, Vice Chair of the UK branch of the International Society for Knowledge Organization and presented at last year's Tony Kent Strix Memorial Lecture at the Geological Society in London. For those of you who couldn't attend the event, she has written an extensive feature that traces the history of the award winners going back to 1998, articulating how their research and achievements reflect the scope and evolution of information retrieval through the years. Stella's article segues neatly into UKeiG's announcement that you can now book online to attend Professor Pia Borlund's (Department of Archivistics, Library and Information Science at Oslo Metropolitan University) Strix lecture in London on Friday 29th November.

UKeiG's professional development programme continues to be a huge success attracting delegates from all sectors and disciplines of the library and information profession. In this issue we share delegate feedback on Ned Potter's "Better social media for libraries" and the practical ideas and applications that colleagues took back to the workplace.
Booking is now open for Dion Lindsay's (Managing Director of Real Knowledge Management) Advanced Knowledge Management course on Thursday 28th November, where he explores KM strategy and digital implementation in depth. An overview of the day, with learning outcomes and background information, is featured in this issue.

Earlier this year UKeiG was delighted to announce that the winners of two UKeiG bursary places for the CILIP Conference 2019 were Natasha Chowdory (Clinical Evidence Based Information Specialist, University Hospitals Coventry and Warwickshire) and Stephen Furlong (Information and Engagement Officer, Careers Service, University of York). Stephen's reflections on the event are included in this issue, with Natasha's to follow in the next. It's interesting to read about Stephen's observations as a higher education professional on the periphery of the LIS sector. His report embraces digital innovation, the need for "good data behaviour and good knowledge management".

Other features in this issue include Joy Cadwallader (Aberystwyth University) who gives an update on some new online resources and services and Katherine Allen (Business Development Director, Information Today Europe) who provides a sneak preview of the programme for Internet Librarian International 2019, with details of how UKeiG members can benefit from a 25% discount on the full conference fee.

eLucidate is published three times per volume: around spring, autumn and winter, and an archive of previous issues is available here. We endeavour to feature contributions from experts in the field, keeping members up to date with developments and innovations in the digital information industry, considering the impact on information professionals and

consumers of e-information. Core topics for consideration include digital literacy, effective information retrieval and search technologies, intranets, social media, open access, e-publishing and e-industry research and development.

UKeiG encourages the submission of articles and reports about any of the topics covered by the journal, and contributions and suggestions for content can be emailed to me at the email address below.

Please refer to Notes for Contributors for further information.

I hope that you enjoy this issue. Please share your opinions and feedback and join us in discussions on social media. You can find us on LinkedIn, Twitter and Facebook and also visit the UKeiG webpage for regular news and updates. Our JISCMail discussion list – LIS-UKEIG – is an invaluable networking forum, and don't forget that you can sign up for free UKeiG membership via the CILIP web pages. Once you've joined us, you'll receive our regular e-newsletter.

Best wishes for now,

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The Impact of Artificial Intelligence:
Brave New World?

Gary Horrocks, Editor, eLucidate

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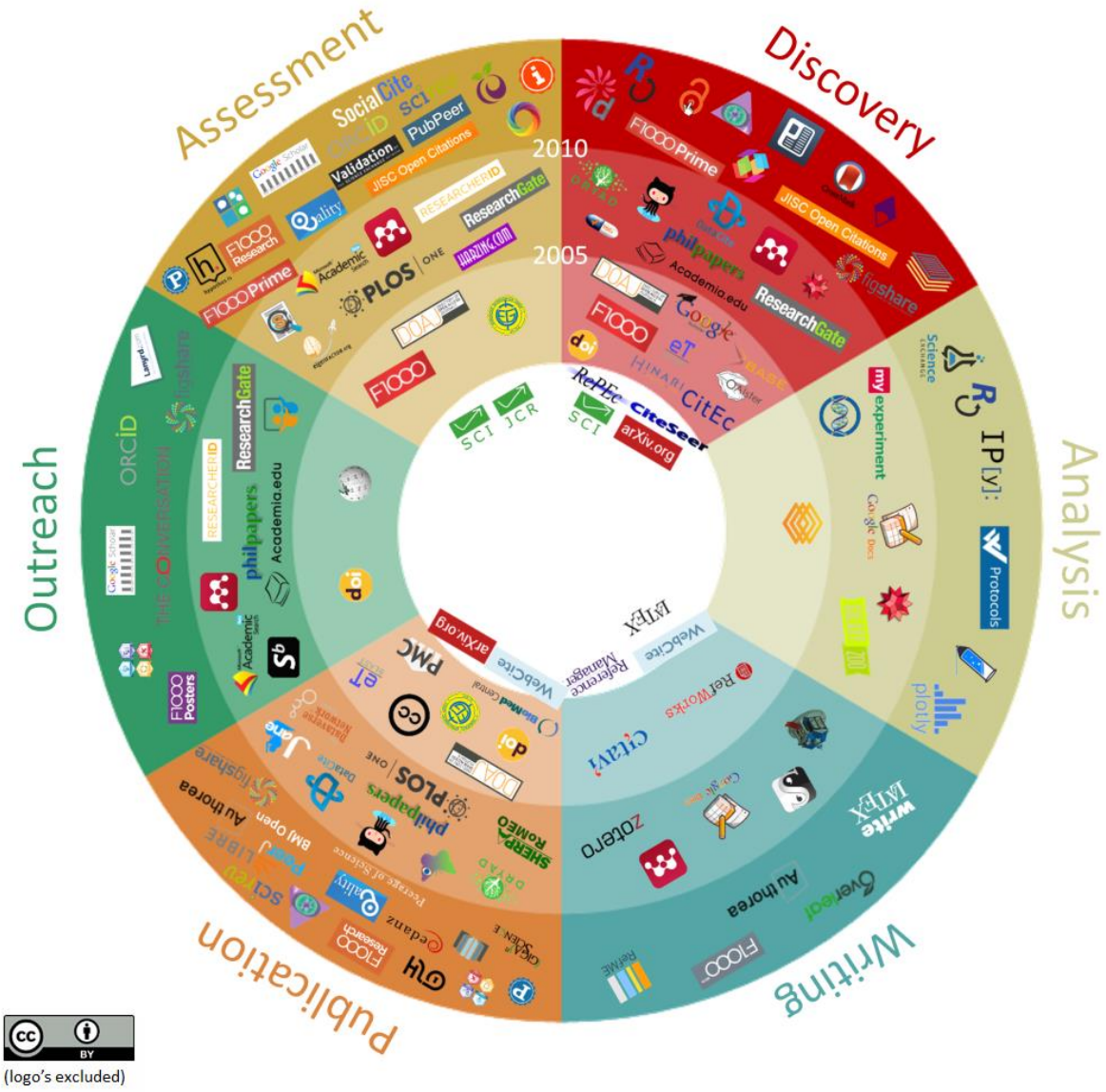
This year's UKeiG Members' Day, held at CILIP HQ on Friday 7th June 2019, was a great success attracting a diverse range of delegates from across the library and information profession. Several sectors were represented including academic, commercial, government and public. AI is all pervasive in the media and often perceived as a "black box problem" - mysteriously complex, ill understood and feared as it threatens a level of intelligent automation that will make the workforce redundant. On the other hand, it is sometimes dismissed as pie on the sky; another new-fangled idea that never quite materialises into reality.

Hype or game-changer?

Michael Upshall initiated the discussion with a fascinating presentation on the role of AI in digital academic publishing, content enrichment and knowledge identification. Far from being blue sky hype, AI was already a game changer. He articulated the work of the UNSILO project: "Rethinking publishing with AI". UNSILO goes beyond traditional string matching and keyword extraction using fully automated concept matching to extract meaning and context. The project utilises a mathematical algorithm to analyse a huge corpus of text identifying descriptive "significant phrases" within a document. It creates clusters of concepts and identifies semantic relationships by processing the proximity of words surrounding a term. The word "bridge", for example, has many meanings and synonymous alternatives. It could allude to a connecting structure, part of a ship, a partial denture or part of a stringed instrument. The terminology that surrounds it imparts context and meaning.

Upshall is using this approach to build "semantic profiles" of scholarly journals, linking the technology to the academic workflow; the complex "circle of scholarship" – six areas of activity in the research cycle, and hundreds of the tools that support the research process.



Bosman and Kramer 2015/16

Machine learning is crucial in scientific publishing where there are currently 24, 000 journals and 3, 000 papers published a day. Manual classification schemes, vocabularies, taxonomies and ontologies have always played an essential role in information retrieval but Upshall argues that they are expensive and fundamentally flawed; reactive not proactive. "They will never be complete. They will never be large enough." The pervasive controlled vocabulary MeSH (Medical Subject Headings) maps the paradigm of biomedical science - neologisms and synonymous relationships - but humans are required to build and maintain them. This human imposition of terminology can distort context and create an artificial language. Moreover, the multiplicity of controlled vocabularies, ontologies, cataloguing standards frameworks and classification schemes makes interoperability and translation between schemes incredibly difficult. UNSILO, Upshall argues, eliminates the ambiguity of human language. By linking data and analysing the proximity of phrases it enables the disambiguation of problematic terminological conundrums like abbreviations and synonymous phrases. "Semantic enrichment" is the way forward argued Upshall. More

controversially, in devil's advocate mode, he announced: "Why even bother building a taxonomy?"

UNSILO's approach is far from pie in the sky and already has several practical, real-life uses, enabling, for example, AI to build profiles of specific academics and researchers, journal and article level analytics. A corpus of 28 million abstracts from the PubMed database has been analysed to develop a "Reviewer Finder." Upshall noted that in 2016 26% of US academics declined requests to peer review papers as they were irrelevant to their research expertise. By identifying the juxtaposition and overlapping of concepts the project has made substantial inroads into improving the peer review workflow, much more easily identifying the most relevant organisations and researchers to submit papers to for review. Similarly, "Journal Analysis" supports the identification of the most relevant journals to publish in. AI is facilitating a much more sophisticated level of data analysis; the notion of "concept curation" way beyond information retrieval based on text. The technology is also capable of translating across subject domains even when there are significant differences and variations in terminology.

Information resource management

David Haynes, City, University of London, presented on the potential role for AI in information resource management (IRM) arguing that, if anything, ontological/typological models were on the ascendant, and that human intervention was key to the implementation of AI this this area. As Chair of ISKO UK, the UK Chapter of the International Society for Knowledge Organization, he referenced the recent July 2019 ISKO UK conference, "The Human Position in an Artificial World – Creativity, ethics and AI in knowledge organization." He also cited Synaptica Graphite KOS, a "powerful tool for creating and curating Knowledge Organisation Systems… based on Linked Data and Semantic Web standards [offering] speed and flexibility in the creation and management of various types of controlled vocabularies." He agreed that concept management was fundamental and extracting meaning and context from complex linguistic relationships and associations between ideas goes way beyond the traditional mapping of hierarchical associations between words.

The key consideration in David's discussion was the nebulous nature of AI across the library and information community. Was it synonymous with automation? Was it the replacement of cognitive processing by machines? There is a multiplicity of definitions that change every day, but the consensus is that AI equates to decision making capability utilising iterative systems that can learn and modify their behaviour.

In order to address the impact of AI on information resource management the first step is to articulate the IRM cycle.

- Identifying information needs
- Defining scope
- Collecting resources
- Organising the resources
- Storage and retrieval

- Make resources discoverable
- Feedback and evaluation
- Disposal

In a workshop format Haynes introduced a practical approach to assessing each aspect of the cycle. What role could AI play in each area of activity?

- Could AI enhance human activity in each area or not?
- Could AI replace this human activity?
- Is there anything uniquely human about these activities?

eLucidate readers are invited to answer some of these questions and email the editor with their thoughts.

Searching for meaning in text

David's presentation segued perfectly into the Director of UXLabs and Founder of 2dSearch Dr. Tony Russell Rose's informative and thought-provoking crash course in the fundamentals of natural language processing (NLP) - the terminology, techniques and applications - and how NLP interfaces with AI. There was, he argued, a significant overlap between the two, but NLP was a sub field of AI and closely aligned to computer science and programming. The primary objective of NLP is to disambiguate language and search for meaning in text. It is a major growth area, a multi-faceted field of research including basic text processing, text mining, the human computer interface, language modelling and lexical semantics.

NLP research faces monumentally complex obstacles confronted with linguistic phenomena. Language is ambiguous and the key tenet of NLP is resolving that ambiguity. Tony illustrated his case in point with some amusing examples of newspaper headlines.

"Prostitutes appeal to Pope."

"Drunk gets nine years in violin case."

"Miners refuse to work after death."

Tony articulated some of the linguistic dilemmas that make NLP so problematic:

- Polysemy, where a word maps to many different concepts - e.g.: Bat (sports), Bat (small animal with wings), BAT (British American Tobacco)
- Synonymy, where one concept maps to many different words – e.g.: Hardworking: diligent, determined, industrious, enterprising
- Word order – e.g.: Venetian blind versus blind venetian
- Stop word removal – e.g.: The Who, Take That, "To be or not to be"
- Stemming – e.g.: fish, fisher, fishing
- Parsing (analysing a string of text into logical syntactic components) – e.g.: "I saw the man on the hill with a telescope"

Tony argued that language is constantly changing. “I want to buy mobile” would have been meaningless twenty years ago, even meaningless today in the United States where “cell phone” is the popular parlance. How would you go about analysing sarcasm, irony, jargon and slang? Similarly, idiomatic language poses key problems. (He was a “dark horse”. She “threw in the towel”.) In a rapidly changing world neologisms are also prevalent. Social media alone has generated many: “Unfollow” and “retweet”, for example.

Tony went on to list some of the disciplines that are researching solutions to these problems, each approaching the challenges with different perspectives. Computer science underpins the foundations of all this research.

- Text analytics – linguistic, analytical and predictive techniques to extract structure and meaning from unstructured documents
- Computational linguistics – the use of computational techniques to study linguistic phenomena
- Cognitive science – research into human information processing
- Information science – the analysis, classification, retrieval, manipulation and dissemination of information

One fascinating field of research that I am keen to explore in a future issue of eLucidate is sentiment analysis; the identification and extraction of subjective information. How do we identify emotions in text; fact versus opinions?

Tony concluded by providing numerous examples of NLPtoolkits and applications including: spaCy software, TextBlob, Apache OpenNLP.

Challenges and opportunities

In January, CILIP CEO Nick Poole sent New Year’s greetings for 2019 to the membership. He cited Artificial Intelligence and machine learning. “If 2018 was a big year for Machine Learning and AI, 2019 looks to be even bigger as the technology continues to make its way into both public awareness and mainstream applications for consumers and the workplace.” AI is very much a reality. It is such an all-embracing term that it includes a multiplicity of technologies and applications at various stages of development. Some innovations and technologies may take years to come to fruition, others are very much impacting on resources and services here and now. Voice recognition, virtual assistants and chatbot services are a typical example.

There are huge challenges and opportunities for the knowledge, information management and library sector. The benefits are obvious, and this year’s UKeiG Members’ Day captured just a few examples of the huge potential that AI offers in transforming digital publishing and information retrieval with the development of analytical tools that identify, extract and analyse text. Information science is a key tenet of AI and the profession is well placed to lead in developments and research in this emerging discipline. Delegates were enthused by the day and eager to learn more. “Food for thought” was a common response.

"Challenging. Compelling". There is a demand to explore the practical implementation of AI in the workplace in much more depth.

The spectre of disintermediation, the impending fear of redundancy, has always haunted the profession. Online in the 1970s, CD ROM in the 1980s, the growth of the Internet in the 1990s, seemingly threatened to displace the library and information professional, but the sector has always risen to the challenge. A key concern about AI is the lack of trust; the potential for bias based on flawed algorithms. Cynicism about Google's search results provides a typical example of the pitfalls that lie ahead. The information professional is well-placed to question those algorithms, to identify and check bias and assure quality. The LIS workforce will be required to refine, review and evaluate AI applications and build business cases for them. AI is also an iterative technology, so will require always require human intervention and "training".

An exciting road lies ahead.

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Challenging Goliath:
Is Microsoft inhibiting enterprise-wide information management?

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My interest in information management dates back to a visit to a conference in Washington in 1979 where I met up with Forest "Woody" Horton. Woody, a former US Army counterintelligence analyst, was passionate about the concept of information resource management (IRM) and had a major role to play in the passing in the USA of the Federal Paperwork Reduction Act of 1980. In essence, IRM treated information as an asset, and for me it provided a framework to pull together all the many elements of managing information that I had acquired in the first decade of my career. If you want to get a sense of Woody's approach, he wrote a brilliant report on information literacy for UNESCO in 2008.

A few years later I got to know Emeritus Professor Don Marchand who was working as a research assistant for Woody. Don went on to become the Dean of the School of Information Studies at Syracuse University and the founder and Director of the Institute for Information Management, Technology and Policy in the College of Business at the University of South Carolina.

In 1996 he moved to the IMD Business School in Lausanne. Between 1997 and 2000 he directed the largest externally funded Partnership Research Project at IMD entitled "Navigating Business Success". This innovative study scientifically examined for the first time the perspectives of senior managers on the effective use of information, people and IT capabilities in improving business performance. The study (funded by Accenture) involved one thousand two hundred managers and over two hundred senior management teams from one hundred and three companies.

From this research Don and his colleagues wrote a series of books about the role of information in decision making, making them pioneers of what you might regard as enterprise information management. Since that time many other books and research papers have been published in an attempt to define "information management" and to assess the impact of good IM practice in many different categories of organisation.

The rise of Microsoft Office 365

To switch to technology, in 2001 Microsoft launched SharePoint as, in effect, a corporate information management application. Over the last fifteen years the scope of this application has been significantly enhanced in terms of functionality, especially since the introduction of Microsoft Office 365 (O365) as a cloud application a few years ago.

There can be little doubt that Microsoft dominates the delivery of desktop information management tools. To be sure there are many other collaboration applications and a growing number of content services platform applications. However, so strong is the Microsoft hold on most IT departments, that any manager wishing to use a non-Microsoft application has a mountain to climb challenging the perceived IT wisdom that Microsoft O365 can solve all known IM challenges. I have seen this visibly in the enterprise search sector where organisations are using the modern interface for O365 totally unaware that it has a search functionality that is not fit for enterprise-wide purposes.

Another major change in organisational management practice over the last decade has been the rise of the edict that "working in teams is the way to business success." The result is that many employees probably spend more time managing their team relationship than they do their personal contributions to the company. There is a very good analysis of these problems from Rob Cross, who developed the concept of Social Network Analysis. The focus is now almost totally on productivity gain, and this is a strong message from not only Microsoft but also Facebook and Google.

The reality is that it is immensely difficult to work out whether there has been a productivity gain, and even if some data was available, the impact on the attainment of corporate objectives is usually very tenuous, as James Robertson illustrated some years ago in his demolition of productivity as the basis of a business case for technology investment.

The last twelve months has seen an avalanche of announcements from Microsoft about the Teams features of Office 365. In effect, Microsoft is saying that the company knows all there is to know about team working and has embedded this knowledge in the Teams functionality. In my view this is going to inhibit organisations from developing solutions that meet their specific requirements, because customising O365 is a very significant challenge. We are seeing this in the intranet business where there is a strong market for both SharePoint/O365-based solutions and also for what I might term independent solutions. Sam Marshall (Clearbox) is planning to extend his intranet vendor report to cover these independent solutions next year.

Invisible roadmaps

One of the benefits claimed for cloud solutions like O365 is that the ability of the vendor to undertake immediate upgrades and fixes means that there is less of a load on IT. Almost every day there is something "new" on O365 and that has two implications. The first is that the Microsoft roadmap is invisible; you know when there is an upgrade when it happens. But this could easily be mid-project. The second is that this may require training and a reconfiguration of the Teams site. Indeed Microsoft seems almost to have released Teams as a beta application, rather than even 80% thought through.

What always happens when enterprise systems do not work is that employees find work arounds. I was looking at a ranked query list for a global company recently and found that the second most popular query term was [Box] with over 100,000 queries in a six-month

period. Looking at ranked query lists is always a good way of spotting work arounds! Try it yourself.

The adoption of workarounds is prevalent in large enterprise content management systems. There was an interesting paper published in 2017 entitled “Information quality, user satisfaction, and the manifestation of workarounds: a qualitative and quantitative study of enterprise content management system users”. The article is behind the Springer firewall but the abstract gives a good overview of the research outcomes.

In the 1960s IT departments started to be concerned at the quality and cost of solutions from IBM and Amdahl. Companies such as Digital Equipment and Data General stepped into the market with lower cost, more flexible solutions, and the rest is history. Could we be at a tipping point with Microsoft? Google and Facebook are both committed to their enterprise solutions and have the money to hang in there. A new generation of content services platform vendors is now emerging, and you can download the Gartner Magic Quadrant analysis of this sector from the Alfresco site.

Microservices…unifying disparate applications

Another important development is that of microservices. These are software components that can link together a wide range of disparate applications. The model for this approach goes back to the Enterprise Portal applications that were the vogue in the first decade of this century but were ahead of the capabilities of the core software. Inevitably with IT, with flexibility comes complexity, but IT and business managers may well be considering if a monolithic adoption of Microsoft technology is no longer the optimum strategy. There is an increasing number of analyses that compare Google and Microsoft as productivity tools, and this is just one example.

I have been saddened over the last year or so to see the enthusiasm with which the Microsoft consulting community has greeted each new release. Among the exceptions is Sam Marshall. Technically the upgrades are impressive, but will they enhance or hinder the way in which your organisation works?

Never has there been a more important time to have an information management roadmap based on a blend of business objectives and user requirements. You need this as a benchmark to assess what level of resource you should invest in adopting enhancements (especially training) in whatever desktop IM application you are using. In addition, it will provide you with the basis to decide what the optimum mix is of applications in what will be an increasingly federated IM arena.

Innovation and Harnessing the Power of Community:
Internet Librarian International 2019

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Internet Librarian International (ILI) will take place at Olympia, London on the 15th to 16th October, with workshops on the 14th October. UKeiG members benefit from a 25% discount on the full conference fee.

After months of planning, the conference programme and keynote speakers have been announced for this year's ILI. Three keynotes will feature insights from publishing expert Yvonne Campfens on innovating like a start-up; Kajal Odedra of change.org on harnessing the power of community, and Silvia Modig, MEP and President of the Finnish Library Association.

ILI celebrates library innovation of all types, from large scale, high-budget projects to small-scale practical initiatives. The theme of innovation through collaboration is picked up by Yvonne Campfens in her opening keynote "Create, innovate, collaborate: learning from start-ups." Based in the Netherlands, Yvonne has researched and worked alongside many start-ups in the scholarly communications ecosystem and will highlight examples of how innovation and collaboration can be encouraged across different information sectors. Day two will open with a talk from Kajal Odedra, Executive Director of Change.org and author of the forthcoming book *Do Something: Activism for Everyone*. In her keynote

“Harnessing the power of community”, Kajal will talk about engaging hearts and minds and the power of communities to bring about collaborative change.

ILI’s final keynote will come from MEP Silvia Modig, who is also President of the Finnish Library Association. In her keynote “Libraries in Finland – a good news story” she describes Finland’s enthusiastic embrace of libraries and considers what lessons can be learned from this approach.

The ILI conference programme features over seventy speakers. The emphasis is on case studies, providing insight, inspiration, and ideas for information professionals from every type of library setting and from all over the world.
Delegates can move freely between six tracks over the two days.

Users and UX with sessions on User Experience research, service redesign, Augmented Reality (AR), Virtual Reality (VR) and UX.
New visions, new strategies including sessions on tools for strategic redesign and evolutionary change.
Digital, diverse, disrupted with sessions on developing digital inclusion and tech for engagement.
The digital scholar includes virtual content for the virtual scholar, collaborative learning partnerships and research, repositories and RDM.
The rebooted librarian looks at STEM in libraries, digital skills and the futureproof librarian.
Magical marketing features sessions on reaching your audience, amplifying engagement, and podcasting.

ILI registration is now open, with a range of ticket options and discounts to choose from. See the full programme and sign up here.

Discounts for UKeiG Members

UKeiG members are entitled to claim a 25% discount on fees for the main conference using code *UKEIG25* when registering. Discounts are also available for multiple delegates from the same organisation.

[Internet Librarian International 2019]

The Library Innovation Conference

15th & 16th October 2019, Workshops on 14th October 2019

Olympia, London

ILI is co-located with Taxonomy Boot Camp London, now in its fourth year.

Further information from organisers, Information Today - *info@internet-librarian.com*

Then and Now:
Contrasts in the scope of information retrieval

Stella G Dextre Clarke, Vice Chair, ISKO-UK

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This presentation was delivered as an accompaniment and scene-setter for the Tony Kent Strix Award Annual Memorial Lecture in November 2018. The prestigious Award was inaugurated in 1998 by the Institute of Information Scientists. It is now presented by UKeiG in partnership with the International Society for Knowledge Organisation UK (ISKO UK), the Royal Society of Chemistry Chemical Information and Computer Applications Group (RSC CICAG) and the British Computer Society Information Retrieval Specialist Group (BCS IRSG).

The Tony Kent Strix Award is given in recognition of an outstanding practical innovation or achievement in the field of information retrieval in its widest sense, including search and data mining, for example. This could take the form of an application or service, or an overall appreciation of past achievements from which significant advances have emanated. The award is open to individuals or groups from anywhere in the world.

Stella Dextre Clarke is a past winner and currently the Vice Chair of ISKO-UK (International Society for Knowledge Organization).

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In considering how the scope of information retrieval (IR) may have evolved over the years, this article has twin objectives. Firstly, it should provide some context for those who never had the chance to meet Tony Kent and may wonder why we still honour his leadership and achievement. Secondly it responds to my personal curiosity about the meaning of "Information Retrieval", after a reviewer queried my use of the term in a recent article.

I should explain that I had used the term quite broadly, to include all the steps involved in any kind of searching for information, whether automated or manual. I then applied it more specifically to the context of thesaurus use. My reviewer thought this would not be understood, because, "research in IR has largely migrated to computer science and the term seems to have changed meaning in the direction of search engines." To explore whether/how the meaning of the term has changed, the first part of my presentation compared a modern definition with others from the early days, and especially from the time when the IR pioneers were inspired by Tony Kent. In the second part, I listed the principal IR achievements of the past winners of the Strix Award, looking for any trends that might reveal an evolution in the scope of IR.

Definitions then and now

Let's start with how the term is understood today, and Wikipedia is the obvious place to look:

> *"Information retrieval (IR) is the activity of obtaining information system resources relevant to an information need from a collection of information resources. Searches can be based on full-text or other content-based indexing. Information retrieval is the science of searching for information in a document, searching for documents themselves, and also searching for metadata that describe data, and for databases of texts, images or sounds."*

Arguably that definition can be interpreted to include manual processes, although plainly it will mostly be applied to computer-driven processes. An equally broad but more authoritative definition can be found in the current international standard ISO/IEC 2382:2015, "Information technology — Vocabulary":

> *"Actions, methods, and procedures for obtaining information on a given subject from stored data."*

But now let's go back to the post-war period, long before the era of the personal computer. Calvin Mooers is usually credited with coining the term, and in 1951 he wrote:

> *"Information retrieval is the name for the process or method whereby a prospective user of information is able to convert [his or her] need for information into an actual list of citations to documents in storage containing information useful to [him or her.] Information retrieval embraces the intellectual aspects of the description of information and its specification for search, and also whatever systems, techniques, or machines that are employed to carry out the operation."*

Understandably there is no mention here of a computer, but the context of Mooers' work was the "mechanical organization of knowledge", in particular a technique he called "Zatocoding". "Coding" was not a synonym for "programming" but referred to a way of expressing descriptors in a short, coded form that could be applied to a card-based system. His examples ranged from a small deck of machine-sortable edge-notched cards to the immense stack of 80-column IBM cards needed for a collection the size of the Library of Congress (5 million documents in those days).

Scientists from the Royal Society of London were keenly interested in IR, which they saw as dependent on classification. This led to establishment in 1952 of a Classification Research Group (CRG), which in 1957 published a Memorandum entitled "The Need for a Faceted Classification as the Basis of All Methods of Information Retrieval." While recognising four distinct "mechanisms" for IR, namely indexing, classification, automatic selection (e.g. Mooers' Zatocoding) and co-ordinate indexing (e.g. Mortimer Taube's Uniterm method), the memorandum argued that a standard faceted classification should be the basis for all of these.

A decade later scientists and engineers were still pressing for R&D in IR, with much the same scope in mind. In the *Aslib Handbook* of 1967, John Sharp wrote "information retrieval is taken to cover all the techniques, conventional and non-conventional, which

are used to provide for the recovery from a store of documents of those items which are relevant to a stated information need". Like Mooers and the CRG, his definition included whatever classification, indexing or other processes might be needed; and all of them assumed the aim of IR was to identify relevant documents in some kind of storage.

At around the same time Tony Kent had agreed to head a research unit established at Nottingham University with the backing of the British Chemical Society. Their aim was to investigate potential uses of the machine-readable tapes used in publishing *Chemical Abstracts*. The tapes were a by-product of the automated production process for the printed journal, not designed with IR in mind. But Tony was not just a zoologist and keen birdwatcher; he was already fascinated by the potential of computers to extract information from his ornithological records and determined to explore what more could be achieved with structured text data.

IR expectations in the sixties and seventies

To appreciate the boldness of Tony Kent's venture, we need to contrast his pioneering spirit with the mindset of IR front-runners at that time. It is true that Vannevar Bush had anticipated key IT functionality in 1945, with his hyperlinked "Memex" machine. Arguably Paul Otlet had too, in his Mundaneum vision in the years from about 1910. And the computer was not unheard of. But still by 1970, computer use was way beyond the budget or floor space of the typical library or information centre. Use of a computer for IR purposes was beyond the wildest dreams of most researchers. Tony Kent's vision seemed like pie in the sky.

Predominant in the 1960s (and beyond) was an expectation that thorough IR must always somehow depend on classification. Even if computer-generated KWIC (KeyWords In Context) indexes – and variants such as KWOC (KeyWords Out of Context) – were proving their worth for current awareness services, their weakness was seen to be reliance on *words* rather than *concepts*. Classification was recognised as the key technique to analyse the *subject* of a document rather than the *terms* to be found in it.

At the same time, several alternative or supporting technologies were on the up, among them:

- Microfilm and microfiche, allowing a larger collection to be stored in the same space;
- A huge variety of card systems – edge-notched cards, feature cards, item cards, aperture cards, 80-column cards, peekaboo cards, optical coincidence cards, machine-sortable cards, even ordinary catalogue cards – for the indexes and sometimes abstracts of the items in the collection;
- Computer-generated KWIC and KWOC indexes, even SLIC (Selective Listing In Combination) indexes, carrying SDI (Selective Dissemination of Information) services from the likes of the American Chemical Society and the National Library of Medicine.

And there was much research into use of computers for analysis, classification and indexing of documents, including machine translation. Techniques based on sorting delivered early successes.

From the literature of the 1960s, here are a few verdicts from researchers into the IR potential of computers:

> *"So far as indexing and searching go…good 'manual' systems are still every bit as effective in the vast majority of cases, and very much cheaper".*
>
> Jack Mills (1963)

> *"The costing of computer-based systems seems…to be almost fatuous [on grounds firstly of effectiveness and secondly of the high prices paid]".*
>
> John Sharp (1967)

> *"It is here [automated SDI] that mechanization offers possibilities".*
>
> Wilfred Ashworth (1967)

I hope the above quotations illustrate the scepticism that confronted Tony Kent when he took on his Nottingham appointment, not to mention the unknown quantity of any text processing vision or methodology. Undaunted, he went on to launch the commercially successful UK Chemical Information Service (UKCIS), and his leadership inspired a great many others to follow. A lot more about Tony's subsequent achievements can be found in a booklet about the Tony Kent Strix Award, assembled by the organising committee and downloadable now from the Strix Award web page. In Section 5 of that booklet, Jan Wyllie quotes two sceptical, or at least cautionary, remarks from the great man himself:

> *"I refuse to believe that knowledge can be inferred from any conceivable software system".*
>
> - from Trend Monitor Reports, July 1991

> *"Real literacy (as opposed to computer literacy) is a necessary prerequisite for the effective use of information, and…computer technology can only, at best, provide gadgets that reduce drudgery".*
>
> – Ibid., December 1989

Moving forward

Since those early days five decades of research and technology progress have transformed the scene and brought IR from the wish-list of the scientist to the fingertips of the general public. And has the meaning or scope of "information retrieval" changed in that time? Maybe some clues can be found in the list of topics of past winners of the Strix Award – (see Table 1). Or maybe not. No clear trend stands out for me. In recent years one interesting feature is an emphasis on the human side of things. Plainly the nominators and judges have been impressed by leadership in support of the user, or to encourage communities of IR students, researchers and developers.

Table 1: Past Award winners, and the IR achievements for which they are noted

Year/Winner	Principal achievements
2018 Pia Borlund	IR user studies, evaluations and test design, especially the Interactive Information Retrieval (IIR) evaluation model.
2017 Maarten De Rijke	Computational methods for analysing, understanding and enabling effective human interaction with information sources.
2016 Maristella Agosti	IR community leadership, as well as research in hypertext, digital libraries, evaluation methodology and more.
2015 Peter Ingwersen	Theoretical understanding of IR, applying this notably to integration of IR and human information seeking processes.
2014 Susan Dumais	Research at the intersection of Human-Computer Interaction (HCI) and IR, such as co-invention of Latent Semantic Analysis and Indexing (LSI).
2013 W Bruce Croft	Clustering, passage retrieval, sentence retrieval and distributed search, ranking functions, language modelling, and more. Croft was a distinguished IR all-rounder.
2012 Doug Cutting and David Hawking	The Award was shared between Cutting, who developed Lucene and Hadoop software; and Hawking, the coordinator of two tracks of the Text REtrieval Conference (TREC) who also developed enterprise search software.
2011 Alan Smeaton	Techniques for Natural Language Processing (NLP) in text as well as for indexing and retrieval of non-text data.
2010 Michael Lynch	Variety generation, applied firstly to chemical substructure searching and then more generally, e.g. to databases of chemical reactions.
2009 Carol Ann Peters	Leadership and sustained development work on the Cross Language Evaluation Forum (CLEF).
2008 Kalervo Jarvelin	NLP method evaluation, ontology-based query expansion and relevance feedback, cross-language IR (CLIR) methods/evaluation and IR evaluation metrics.
2007 Mats G. Lindquist	Digital library work, including a lead role in the Paralog IR software.
2006 Stella Dextre Clarke	Development of GCL/IPSV classifications for the UK public sector, plus work on British and International thesaurus/interoperability standards.
2005 Jack Mills	Research on faceted classification, the Cranfield IR project, and revision of the Bliss Classification scheme.
2004 Keith van Rijsbergen	Theoretical modelling of IR systems.

2003 Herbert van Sompel	Development of the Open Archives Initiative (OAI) and standards such as OpenURL, Object Reuse and Exchange, and the OAI Protocol for Metadata Harvesting.
2002 Malcolm Jones	Research leading to implementation of the web-based *Encore!* union catalogue of musical performance sets, and development of the International Standard Music Number (ISMN) standard.
2001 Peter Willett	R&D in chemoinformatics and many other standard capabilities of IR software.
2000 Martin Porter	Developing the Porter stemming algorithm and later the IR software of Muscat and derived commercial products.
1999 Donna Harman	Leadership of the TREC.
1998 Stephen Robertson	Probabilistic methods of IR, notably the BM25 ranking algorithm, coupled with interface design and other aspects first demonstrated in the OKAPI software. Contributions also to the TREC.

What really has changed is the social and technological context in which IR is applied, leading to a huge expansion in scope, (see Table 2). The first challenge for information professionals in the pre-internet days was often getting hold of literature from remote places. In the 1960s an in-house collection was indispensable, and much effort was put into selection of its content, coding and microfilm, etc., all with the object of keeping things small, manageable and affordable. Nowadays size is not an issue, as resources from all over the world can be accessed via electronic networks. The ubiquity of computers and smartphones has brought a need for IR to almost everybody. With a computer built into the car engine, the phone, even the oven and the refrigerator, the scope for IR has expanded almost beyond recognition. As the Strix Award list illustrates, IR has applications in all fields, from music to chemistry and many, many more, without linguistic limits.

Table 2: Contrasts in the scope of Information Retrieval

Then (1960s)	**Now (2019)**
Applications of limited size	The only size limit is in your imagination
In collections, especially libraries but also some bibliographic databases (on cards or on magnetic tape)	The same, plus virtual collections, networked resources, non-text media, multilingual content, unstructured data, intranets, PC content, and more
Classification, indexing, sorting, citation indexes, hyperlinks in theory	The same, plus ranking, stemming, filtering, LSI, clustering, linked data, etc.
Computer use a rare luxury, value disputed, reliant on batch processes	Computer use the norm, mostly online and interactive. And computers are *everywhere*
Led by scientists, engineers, professional societies, librarians	Consigned to the IT department? Or is it *everyone's* business?

Conclusions?

Concerning the definition of information retrieval, the early ones were not based around computer science, even less around search engines, and this has not changed in current definitions. That said, computer use is the norm for almost every task nowadays, and there is no denying the prevalence of search engines. I suggest that computer science will continue to fuel advances in IR, but not in an exclusive way. There is a continuing opportunity and a need for imaginative IR enthusiasts, in the mould of Tony Kent, from all fields and any walk of life.

I suggest also that in many contexts the activities of metadata preparation, classification, indexing, etc. are considered valid components of IR, as they were in the early days. Data storage too is still within the field, though not essential to a particular IR task.

The assumption that it was enough to retrieve relevant *documents* has certainly moved on, in those systems which seek to pinpoint the relevant paragraph, word, phrase or character string.

In the modern context the Wikipedia definition "… the activity of obtaining information system resources relevant to an information need from a collection of information resources" could do with an update, as the stipulation of a collection seems debatable. When we search using Google, arguably there's a "virtual" collection, but "nebulous", "arbitrary" or even "non-existent" might describe it better. And as to basing IR on an "information need", what about serendipitous finds from surfing the Internet – a retrieval activity or not?

Most of the time we function intuitively without careful definitions, and no doubt you have your own view of what IR should cover. I'm sticking with my broad interpretation of the scope!

And where next for IR?

Just a few of the expanding opportunities for IR include the following:

- Finding a particular nugget of information amongst the deluge - still a challenge despite (or perhaps because of) the oceans of information available to us all.
- IR still has a long way to go with multimedia collections, especially audio resources
- The Internet of Things will offer unlimited scope.

While preparing this presentation, I tried to let my mind run free over the developments I'd really like to see. The first occurred to me when putting together the reference list you'll find below. I had already assembled the various quotations mentioned above, by looking online, and in the various directories and databases on my PC, and from the runs of journals, textbooks and anthologies that line my study. Frustratingly, I had not recorded where I found each of them. What if some future IR capability would let me run a search over all those resources, printed and electronic, at one fell swoop? That may sound

ridiculous to the point of unthinkable, but much of what we take for granted now was unthinkable in the sixties.

What more could I wish for? Sometimes when I delve into my old files, I'm amazed to read things written by myself that once upon a time I must have known thoroughly. And I am not the only one! Maybe you too wish you could easily retrieve all your long-lost memories? Could it be that the future will see some kind of convergence between IR and the research into Alzheimer's disease, enabling all of us to function more effectively?

Just as the pioneers in the sixties could not have foreseen how IR would expand into the 21st century, so our predictions for the next fifty years are unlikely to be accurate. But there's hope, and there's scope, for many exciting IR successes to come.

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Professor Pia Borlund:
5th Tony Kent Strix Annual Memorial Lecture

Friday, 29th November 2019 at The Geological Society, Burlington House, Piccadilly, London

UKeiG would like to inform you that the 5th Tony Kent Strix Annual Memorial Lecture 2019 is to be delivered by Professor Pia Borlund, Department of Archivistics, Library and Information Science at Oslo Metropolitan University and will take place on the afternoon of Friday, 29th November 2019 at The Geological Society, Burlington House, Piccadilly, London.

This is a free event. Book here.

Professor Borlund was nominated for the award by Diane H. Sonnenwald, Emerita Professor of Library & Information Studies at University College Dublin and received unanimous praise and support from the Strix judging panel. “Similar to the memorable Dr Tony Kent, the work by Borlund is original and innovative, and has had a significant impact on information retrieval (IR) research and applications. Her approaches are analytical and practical, and her devotion and dedication to users and interactive information retrieval (IIR) are outstanding. Within the IR community, Borlund is known for her innovative contributions to IR user studies, evaluations and test design, including strong, novel methodological contributions to IIR evaluation. In particular, she is recognised for the development of her IIR evaluation model which uniquely employs simulated work task situations. Borlund developed the IIR evaluation model as a doctoral student by taking up the challenges of the calls put forward by Professor Stephen Robertson (recipient of the first Tony Kent Strix Award in 1998) and Micheline Hancock-Beaulieu, in their iconic 1992 paper on IR systems evaluation”.

The Award was presented by Doug Veal (Strix Chair) and David Ball (UKeiG Chair) and accepted by Dr Andrew MacFarlane on Professor Borlund’s behalf on the afternoon of Friday November 23rd, 2018 at the Geological Society, Piccadilly, London. “I’m very pleased and very, very honoured to receive the Tony Kent Strix Award. It’s a privilege to join the past recipients who I have admired and respected since I was a student”.

For more information about Professor Borlund please refer to the PDF documents.

Her 2019 Strix lecture is entitled: “Evaluation of information searching”.

Abstract: My Tony Kent Strix Memorial Award 2018 acceptance talk introduces the research area of interactive information retrieval (IIR), which is concerned with how people search for digital information. More specifically, the presentation addresses methodological issues of IIR evaluation in terms of what it entails to study users' use and interaction with IR systems, as well as their satisfaction with retrieved information, by presenting the IIR evaluation model. Central to this model is the employment of simulated

work task situations as assigned search tasks, which has become a standard way of testing users' interaction and satisfaction in IR. Though this approach of assigned search tasks appears simple and easy to employ it is in fact challenging, and wrong use may have implications for evaluation results, therefore strengths and weaknesses will be discussed.

Full programme details:

- 1.30 Registration
- 2.00 Douglas Veal - Chairman's welcome
- 2.10 Introductory presentation - speaker to be announced
- 2.45 Questions & Discussion
- 3.00 Tea & coffee
- 3.45 The Tony Kent Strix Annual Memorial Lecture
- 4.30 Questions & discussion
- 5.00 Meeting closes

*** This is a FREE event, open to everyone, BUT advance bookings ARE required ***

Please book your ticket online here.

We hope to announce the 2019 Tony Kent Strix Award winner during the afternoon.

For more information about UKeiG and the Tony Kent Strix Award visit here.

UKeiG:
Committed to Continuing Professional Development

2019 has been a successful year to date for the UKeiG continuing professional development programme. UKeiG courses, run in liaison with industry experts, included:

- Presentation skills for information professionals
- Research data management
- Open access, open monographs, open data, open peer review
- Practical knowledge management
- Navigating the Deep Web: advanced search strategies for researchers
- Search usability: filters and facets

Information about upcoming courses for the rest of the year is available on the UKeiG web site.

In order to ensure the relevance of our courses and events the UKeiG Management Committee is keen to work with our members to focus on seven key strands for development:

- Information retrieval/search
- Scholarly communications/open access
- IM/KM/intranets
- Social media
- Ethics, legal compliance, intellectual property
- Digital literacy
- e-information/e-industry R&D

If you have any questions, feedback or suggestions about our CPD offering please contact UKeiG's Honorary Secretary John Wickenden in the first instance at:

secretary.ukeig@cilip.org.uk

Better social media for libraries

In this issue of eLucidate we're sharing some delegate feedback on Ned Potter's CPD offering "Better social media for libraries: Twitter, blogs & Instagram".

Terri McCargar, Librarian at Latymer Upper School, London, writes: "I would like to say how much I enjoyed the course; a perfect combination of learning new ideas, time to reflect and time to experiment with some of the sites/tools mentioned. Ned is a natural presenter and the course was practical and interesting. I took several thoughts away from the day. Maybe we do require a library Instagram account after all? I thought Instagram was all about celebrities and selfies. I'm also going to fret less about creating content and try to play more with re-tweeting useful information on Twitter. The free photograph and

image tools that Ned shared were great and will help immensely not only with our social media posts but also with our in-house marketing/promotion".

Emma Halford, Lead Library Assistant at Harlow Healthcare Library, Princess Alexandra Hospital NHS Trust in Essex comments: "I now have a much clearer idea of the purpose and potential of our social media use, and the need to encapsulate this in a document to which the whole team can refer to. I was unaware of the excellent tools and resources to help me create better social media content. Most notably I have a changed understanding of Instagram, with a potential project to pursue with two partner libraries".

Theano Manoli, Library Services Advisor at Royal Agricultural University Library, Cirencester kindly gave UKeiG her permission to share the following blog post (and photographs) with eLudicate readers.

"As an information professional who is involved with social media and library marketing, I gravitate toward topics that relate to my role such as:

- Taking our library's use of social media to the next level
- Using social media more strategically
- Understanding and learning from statistics from multiple social media platforms
- Making use of social media tools and techniques to help our library increase engagement online

The RAU Library promotes its services on two social media platforms: via Facebook (for eight years now) and on a WordPress blog (for a decade.) These tools have proved to be a boon in the marketing of our library services. Social media allows us to target our student audience with tailored, appropriately worded and relevant messages.

Facebook seems better for reaching students and we have a fair number of "friends" given the size of our library. Anything that raises the library's profile inside and outside the parent institution is a good thing, and indeed essential for reaching today's target market – the Millennial Generation Y student. So, I would argue that we have seen a return on the time and investment in setting up and maintaining these two platforms.

It is evident from monitoring Facebook and our blog that social media helps us to create an immediate interaction with our users and spread awareness of our library services to those who may not be aware of them.

In our library we use social media as:

- Our communication tool to inform our students about changes in opening hours, reservations, reminders etc.
- A marketing tool to market our products and services, events and activities

- A data source to obtain feedback from our students regarding the services we offer and their satisfaction with them

The themes I encountered throughout the UKeiG course were:

- Social media tips and best practices
- Using social media more strategically to promote interaction
- Understanding the importance of analytics and using tools to analyse impact
- How to create better content with a clear focus
- New tools for creating, monitoring and publishing social media and increasing engagement

We looked in detail at YouTube, Instagram, Facebook, blogs, Twitter and how we might benefit by using these tools to engage our audiences and reach new users. Each has a different focus and features. A key problem is that it requires staff time. It is not enough to simply have a presence on these sites. We need to be continually active and constantly engaging with our audience.

Ned Potter provided a thorough overview of the latest social media marketing tools and gave us all the tips, ideas and help we need to help promote libraries to our community. He also provided the group with lots of practical activities, advice on how to make inspiring content and increase user engagement and was happy to answer any questions or queries we had. I came away from the course with lots of ideas that I'm now keen to put into practice.

I found the social media course highly informative, well-presented and very enjoyable. What I enjoyed most about the training was the practical aspect, learning something new and reinforcing previous knowledge. It was also interesting to mix with professionals from other sectors and exchange ideas and experiences. I already use Canva and has been a great tool for me. I will make use of the free copyright images resources for our library blog.

Now I understand the importance of measuring and analysing impact I will continue to monitor and collect data, identify tends and try to get a steady increase in use. We may consider the use of Instagram for promoting our historical books and Archives.

Unavoidably, we cannot survive if we lag behind as far as social media is concerned. Most of our students are on social media. We therefore need to be where our students are. It is up to us to decide how to take our social media accounts to the next level and whether we wish to enhance our online presence and our interaction with our user community."

Advanced Knowledge Management:
Strategy & Digital Implementation

Dion Lindsay, Real Knowledge Management (DLC Ltd)

Thursday 28th November 2019, 9.30 am to 4.30 pm

Venue: CILIP Headquarters, London

Overview

This advanced course explores KM strategic planning and how to implement KM platforms effectively in the digital workplace. It mixes a little theory with case studies and current issues to help you to articulate an organisational business plan to champion and start you on the road to a pervasive and successful KM culture in your organisation.

It assumes a basic understanding of types of Knowledge Management (a booklet on the essentials will be available before the course) and emphasises the enterprise-level implications of KM.

It is a more advanced course than Dion's popular "Practical KM for Information Professionals."

Course outline and learning outcomes

While KM theory is embedded in human behaviour, successful implementation is increasingly related to the pressures on organisations to thrive in a complex and demanding digital environment. Successful knowledge managers must be able to address:

- The human-behaviour perspective (improving staff engagement, encouraging knowledge sharing, signposting skills and attributes)
- The digital present and future of KM platforms alongside an understanding of issues like big data and the prospect of artificial intelligence

This course, led by a KM consultant and trainer with understanding of how KM is currently being developed in the workplace, will show you how to plan strategically and implement modern Knowledge Management for your organisation.

Topics covered include:

- Strategic principles of Knowledge Management
- KM software, platforms and systems
- Current KM issues such as BS 30401, maturity models and risks to KM units
- Organisational learning and the role of knowledge in decision making

- The relationship between artificial intelligence and big data techniques alongside knowledge management

By the end of the course you will be able to:

- Assess the work environment in which your KM strategy needs to thrive
- Appraise and critique marketing material for current KM platforms and applications
- Judge the feasibility and "stickability" of KM pilots, programmes and projects
- Measure the progress of KM initiatives against expectations and realistic objectives
- Partner with IT and Communications departments for win-win strategies
- Assess your KM plans against a variety of case studies and current developments

Who should attend?

- KM practitioners and managers who want to take their skills and knowledge to the next level
- Senior managers with responsibility for knowledge mobilisation and sharing initiatives who need an enterprise-centric view of KM
- Information managers who are considering developing their services into the KM space
- Senior professional services staff outside of library and information services (IT, Finance, Communications, HR, for example) who require a strategic overview of KM implementation issues

Delegates who attended previous iterations of this course said:

"Very useful - lots of interesting themes emerged"

"Practical examples, good pace"

"Really useful course!"

CILIP's Professional Knowledge and Skills Base (PKSB)

This course supports the following broad elements of CILIP's PKSB:
Organising Knowledge & Information - Knowledge & Information Management - Leadership & Advocacy - Strategy, Planning & Management - Customer Focus, Service Design & Marketing - IT & Communication

Course Leader

Dion Lindsay has a wealth of case studies and lessons from knowledge management initiatives. He has designed and implemented effective KM and IM strategies for major charities, regulatory bodies and membership organisations, and runs inhouse training courses in the public sector.

His expertise in running workshops will ensure you leave with KM plans and ambitions you believe in and can sell to your fund-holders and practitioners alike.

He is an author of books on Business Intelligence and Social Media Governance and writes for Refer and eLucidate on KM topics.

Booking

Book online here or contact Gary Horrocks at *info.ukeig@cilip.org.uk* if you have any questions.

Further information about course content is available from Dion Lindsay at:

dion@dionlinsayconsulting.com

A view from Oxford Road:

Reflections on CILIP's 2019 conference @ University of Manchester

Stephen Furlong, Information and Engagement Officer, Careers Service, University of York

stephen.furlong@york.ac.uk

In my role I don't get the chance to attend many information-specific events. I am an Information and Engagement Officer in the Careers service at the University of York. I help students search and analyse career-related information, manage a set of career-related information resources and share labour market information amongst our teams.

A bursary from UKeiG to attend the 2019 CILIP Conference gave me a rare opportunity to meet other information professionals and hear what was going on in the sector. This report is an overview of the sessions I attended and the key points I took away from the experience. Wherever possible I have focused on electronic information, but the scope of the conference and the sessions I attended meant not everything I heard or reflected on took this focus. I've linked to relevant resources where they're available.

Ahead of the conference I was keen to learn more about good data practices and information management, but apart from that I intended to be open-minded and attend a range of sessions. In hindsight, this made for a disjointed experience - an opinion shared by several people I talked with at the conference - and made it hard to pull key themes for a report like this. Nonetheless, I've tried to summarise what I learned into a few broad areas.

Individual and collective reflection

The importance of reflection was mentioned repeatedly, especially in the keynote talks.

Liz Jolly, Chief Librarian at the British Library, captured this in her keynote on librarianship and professional identity. Citing writers like Paulo Freire and Jennifer Moon, Liz encouraged delegates to be reflective practitioners and consider questions like: what are our individual values and vision? Do we have limits that we won't cross, and why?

Liz also had questions for the profession as a whole - or perhaps, the library part of the profession - asking if we had made librarianship too exclusive through our focus on professionalism and a "fetishising" of Masters' degrees. From discussions during the conference there appeared to be some consensus building that, considering the cost of postgraduate study and the extreme lack of diversity in the profession, such a reliance on a Masters' degree for entry into many professional-level roles was unjustifiable.

There was much I valued in this keynote. Most of all I appreciated Liz's honesty talking about professional and personal setbacks, mirroring a trend in recent years of senior managers being more open about failures, weaknesses and fears.

Patrick Lambe continued the reflective theme with his keynote on knowledge in society and our role in it. Patrick argued that creating the theoretical "good citizen" involved several professions that contributed to productive knowledge use. These include journalists, teachers, economists and librarians, among others.

Hearing this, I wondered how many people walking along Oxford Road in Manchester outside the conference centre would put librarians on that list. I imagine many would be bemused at their inclusion. It's not surprising then that Patrick also argued we should be more vocal about the important work we do in knowledge creation. Easier said than done.

Hong-Anh Nguyen, Information Centre Manager at The King's Fund, gave the first keynote on day two. Her talk entitled "Questioning Diversity" asked delegates to consider whether their organisations were racist. In a compelling and inspiring talk, Hong-Anh detailed the unacceptable statistics showing the whiteness of the profession, outlined the extent of structural racism in society and our workplaces and encouraged everyone to take action - especially those in privileged positions.

Among the initiatives in place at The King's Fund, I was impressed by a mentoring scheme in which people in positions of responsibility - senior managers, for example - were mentored by people in lower grade roles. Hong-Anh described this as a good process because people in positions of power are not always in the position to hear direct feedback from people "lower down" an organisation.

DILON (Diversity in Libraries of the North) has an excellent blog on being an ally.

Digital innovation

As ever, using technology in new ways came up repeatedly. A panel session with Olly Hellis from Somerset Libraries, Val Stevenson from Liverpool John Moores University (LJMU) and Andy Tattersall from the University of Sheffield gave an insight into how different sectors are using tech.

Olly outlined the work happening in the Glass Box in Somerset Libraries, an innovation and enterprise space in Taunton Library, which helps to build digital skills, provide a place to research, study and collaborate, and engage people with other areas of the library service.

Olly noted how important it was that the library subscribed to electronic resources that members of the public couldn't access for free on the Internet. For example, he said that subscribing to COBRA and Mint UK gave people wanting to start a business a lot of help they couldn't get elsewhere, and encouraged them to use the space. I haven't worked in

public libraries, but I imagine it is becoming increasingly difficult for public librarians to argue for expensive subscription rates, so I appreciated Olly's forthright stance.

Val Stevenson outlined LJMU's work to "correct the disjointed digital experience" in their library through the creation of a virtual library vision document. This involved aiming to create an excellent customer experience in their digital spaces, replicating the physical space in their digital space and creating a digitally enabled physical space. I found this talk very helpful and topical. I think any information professional working in a customer-facing service will understand the difficulties in creating a coherent service across its physical and digital spaces. In my experience, digital and physical spaces have both improved dramatically in recent years, but perhaps not with each other in mind.

Andy Tattersall's talk encouraged us to ask the right questions of the third-party vendors offering tech solutions, and of any piece of technology or digital resource we are considering adopting into our working practices:

- How often will you use the technology?
- Who created it and who owns it?
- Can you export your content?
- Are they [the vendor/creator] on social media and do they post regular updates? [Andy suggested social media use is a good indicator of the state of a business]
- Is it intuitive to use?
- What do you get with the free version?
- Is there an alternative?
- How long has it been around?

On reflection, I don't think I have always asked these questions, but I intend to in future. Andy also suggested that sometimes it's good to rush into new technology if it clearly has benefits and works well. Canva was Andy's example of this. Other times, it's better to wait and assess before using, especially if embracing new tech involves other people getting on board.

Kriti Sharma, founder of AI For Good and a TED Talk alumnus, covered technology in her opening keynote on ethics in AI. While most of the talk covered what should be familiar ground for information professionals, I found it timely and interesting. The talk focused on many things, including the lack of diversity in the tech sector and the subsequent biased algorithms that are emerging in systems we use every day. Kriti cited a recent news report about an automated job shortlisting system created by Amazon, which was rejecting an inordinate number of women because it was based on biased data (as in, the historic biased recruitment processes of tech companies over many years). Shocking, yes, but there is a positive take on this: because it was a biased algorithm rather than the unconscious bias of a shortlisting panel, the issue was identified and will now presumably be corrected. Too hopeful?

This was an important talk to open the conference with. I think sometimes AI developments can seem detached from our daily work, but many of us now work with and

rely on complex algorithms, and we need to make sure we are aware of the potential for biased systems and be able to spot them.

On a slight tangent, the topic of digital innovation arose on the breakfast seminar on day two hosted by EveryLibrary. EveryLibrary is a US organisation working with CILIP (with funding from Arts Council England) to help campaign for public library funding. It plans to do this through a new website - Libraries Deliver - which, if successful, will create a network of engaged people who care about libraries and who, crucially, can be contacted to sign petitions, donate and campaign. EveryLibrary stressed that it's GDPR compliant. This differs from the current campaigning situation, in which we know very little about the people willing to campaign for public libraries.

The website is built on the Nation Builder platform, a tool used by Emmanuel Macron's La République En Marche party and the People's Vote movement to quickly harness public engagement and build a political movement. It will be interesting to see how successful it is.

Good data

Stephan Hollaender, senior lecturer at the Universities of applied science in Geneva and Chur, and Julian Schwarzenbach, director of the consultancy firm Data and Process Advantage, discussed good data behaviour.

Stephan focused on the effect of data on the librarian's role, suggesting that librarians have been late to focus on the potential of unstructured data. He suggested that in the near future we will see the traditional library management system replaced with an AI module allowing real-time analytics, personalised customer service (for example, through text bots and text mining) and the ability to predict user trends. Stephan focused on the importance of using AI tools to help librarians analyse trends, but warned of potential risks: resistance to data driven changes, no control over data (for example, from restrictive third party vendors or cloud services), unclear roles (who is responsible for it?), and too much data and high costs/over promising by vendors.

Julian, on the other hand, stressed that while AI has a role to play in data management and analysis, it was not an alternative to good data behaviour. He looked at how data-based decisions had risen in recent years, but warned of organisations unwittingly falling into the mantra of 'garbage in, gospel out' - in other words, make sure you aren't making data-based decisions that are fundamentally flawed because of poor data behaviour.

What does this poor data behaviour look like? It is updates not done, a history of failed data migrations and spreadsheets filling in the gaps between databases. Over the years, this bad data governance is impossible to reverse and makes for unreliable analysis. I'm sure anyone who has worked in libraries and has experienced the pain of migrating poor bibliographic metadata across library systems can relate to this.

Julian had created The Data Zoo to help understand data behaviour and advocate for positive governance. This is a helpful tool to reflect on the data practices in any organisation, and I'll be using it to think about how my team works with information.

Taking questions from the audience, Stephan and Julian agreed that information professionals had an obligation to understand data and talk about data literacy. I agree with this point and wonder how many information professionals feel confident talking about or working with data.

Good knowledge management

CILIP is working hard to engage people working in knowledge and information management, and it was evident in the dedicated K&IM strand of conference sessions. I don't work in knowledge management, but I'm keen to incorporate good KM practices into how my workplace shares labour market information.

Sandra Ward, James Freed and Oliver Rolfe gave some context around the Information as an asset board agenda published earlier this year by CILIP and KPMG. The document is a handy primer advocating for the need for good knowledge and information management in what is an increasingly complex information environment. While the document is aimed at board level, I discovered a lot in it that will help anybody wanting to advocate for better KM in their team, department or organisation. I'm certainly going to use it as a tool to help me argue for good KM in a way that colleagues can understand.

In an interesting panel session on K&IM in government Derek Shaw and Larry Mount (from the Ministry of Defence) and Dominic Davies (from the Defence Science and Technology Laboratory), discussed the K&IM issues they face and their solutions. A lot of it would be familiar for people in any sector: ageing staff, multiple unconnected IT systems and storing "old" information in sustainable and accessible ways. Dominic Davies talked about approaching K&IM from a people perspective: people make it happen, and people will only behave in the desired way if organisational culture and reward/recognition match the desired behaviour. Like the previous talk, this firmly positions K&IM as a management practice.

From these talks I took away some simple approaches that will help me think about how my department shares its knowledge. Organisations need to embrace open working as the default and make knowledge capture part of normal working practices.

The final session I attended - Better information behaviour with Katharine Schopflin and Tom Midgley from the information management team at London Borough of Hackney - was the most insightful and helpful session of the conference.

Katharine recounted her experiences of implementing KM practices in different ways. We looked at top-down approaches in which new programmes and strategies are introduced, new roles and departments are created, and change management process are implemented. Top-down is good because it means the leadership is on your side, but it can fail because people don't like to be told how to do their jobs. Embedding KM in job

descriptions, targets and key performance indicators (KPIs) can feel like a box-ticking exercise, and gamification only works as long as the prizes exist.

Instead, Katharine suggested "living with imperfection" and accepting that culture change isn't the job of a knowledge manager. Instead, we should focus on getting buy-in from process owners, have relevant KPIs to measure and enable self-service tools so people can share and store knowledge management themselves.

Tom summarised KM as: observing behaviours, introducing efficient nudges to influence behaviour and "swimming with the tide". He referenced the EAST report from The Behavioural Insights Team as a helpful primer on introducing "nudges" to affect how people work.

Conclusion

What did I learn at the conference? Perhaps that I work in the borderlands of the profession and it's hard to equate a lot of what I do with the talks I heard at the conference. Maybe that was true for a lot of the people attending this cross-sector conference. Nonetheless, I've learned that I need to work on my data skills, that I'm closer to implementing good knowledge management practices than I thought, and I need to ask better questions about the information resources we subscribe to. Thanks to the sessions I attended, I think I have the tools I need to achieve these things.

I'm grateful to UKeiG for the bursary to attend this conference. I enjoyed the rare opportunity to meet people from across the profession. With the support of my colleagues at York I hope I can improve our services using what I learned.

Online Resource Update

Joy Cadwallader, Aberystwyth University

Please send your submissions for the next issue to *jrc@aber.ac.uk*

Audible

In July Audible announced that they were introducing Audible Captions, "to improve literacy rates and inspire students to pick up a book and read". Readers will be able to read a few lines of machine-generated text as they listen to the Audible audiobook. Hachette, HarperCollins, Macmillan, Penguin Random House and Simon & Schuster have already issued a copyright lawsuit.

JSTOR Labs

JSTOR Labs have partnered with the Kunhardt Film Foundation to produce the prototype Interview Archive for searching and browsing "interviews…that contributed to the documentary *King in the Wilderness* about Martin Luther King's final years", including unused content. I had a quick browse: contributors include key members of important civil rights movements and other friends and activists such as Harry Belafonte and Joan Baez. The search includes a rich topic menu and search results include links to related JSTOR articles and ARTSTOR images. Other features include a screening guide and six classroom lessons.

National Library of Wales

A National Broadcast Archive for Wales is taking shape following the award of a £4,751,000 National Lottery grant to the National Library of Wales in Aberystwyth. Two hundred and forty thousand hours of BBC radio and TV footage from Wales, in original and digitised formats, will be combined with the existing ITV Wales archive. 1, 500 BBC Wales archive clips of material will become freely available and hundreds of interactive events are planned "to promote digital learning for young people and health and wellbeing for older people…to help stimulate memories and stories for those with dementia." Selections for digitisation will include "unique pieces…charting the development of the Welsh language and the productions of writers such as Dylan Thomas and Saunders Lewis, as well as recordings of early Welsh language broadcasts". Additional project funding has been donated by the Welsh Government, the BBC and the Library.

University of California/Elsevier

University of California professors are ratcheting up the pressure on Elsevier with a threat to withhold their services on Cell Press journal editorial boards until Elsevier re-opens negotiations towards a new contract with UC. UC is currently without direct access to new articles in ScienceDirect following a termination of subscriptions earlier this year. Signatories include such heavy hitters as Jennifer Doudna, co-inventor of the CRISPR-Cas9

technology to manipulate genes and Elizabeth Blackburn, co-recipient of the 2009 Nobel Prize in Physiology or Medicine. In this UC press release Jeffrey MacKie-Mason, the University Librarian (and co-chair of the team that negotiated with Elsevier) notes, "We have seen signs that there is change afoot in Elsevier since the beginning of the year." He cited read-and-publish contracts signed with Norway and Hungary as "the type of agreement we have been seeking". All eyes are on Elsevier for the next move.

US public libraries/Macmillan et al

From November 1st 2019 in the US, Macmillan will limit public libraries to a single, discounted copy of all new Macmillan eBook titles for the first eight weeks after their publication following a data-gathering experiment on their Tor imprint, and "in response to our growing fears that library lending was cannibalizing sales"(letter from John Sargent, MacMillan 25/07/2019 shared by *Publishers Weekly*). Public libraries will be able to buy one eBook in perpetuity at half price (which must be bought in the eight weeks after release), then additional copies after the embargo at full price which will expire after two years or fifty-two loans. Points made in the many opinion pieces about this in the information press include:

- Most borrowers will wait a long time for popular titles and lose out on the thrill of reading a new eBook on release (Sari Feldman, *PW*)
- The model is "…designed to reward bestselling authors, while penalizing everyone else" (Brian Kenney, *PW* and a public library director)
- Amazon's self-publishing boom is changing eBook sales rather than libraries which, "build audiences for authors and books, promote reading and discovery" (Steve Potash, OverDrive), as evidenced by the Panorama project.

The American Libraries Association (ALA) has denounced the change and distributed a template for state and local library action.

My award for straight-talking advocacy goes to librarian Jessamyn West of Vermont whose CNN opinion piece on the matter begins, "Librarians to publishers: Please take our money. Publishers to librarians: Drop dead". The ALA has also expressed concern over the introduction of metered reading models announced by Hachette and Simon & Schuster. Many thanks to InfoDocket for these nods.

Notes for Contributors

eLucidate is the journal of the UK electronic information Group. It is published three times per volume, around spring, summer and winter. It aims to keep members up to date with developments and innovations in the digital information industry, considering the impact on information professionals and consumers of e-information.

UKeiG encourages the submission of articles, reports and reviews about any of the topics covered by the journal. These include electronic resource awareness, information management, digital/information literacy, effective information retrieval and search technologies, intranets, social media, open access, e-publishing and e-industry research and development. UKeiG can't pay contributors, but you will retain your copyright and will be able to republish your work elsewhere.

Please follow these simple guidelines:

About our members

Our membership is eclectic and includes information professionals at all levels of the UK workforce involved in digital content management and awareness, information dissemination, training and service delivery.

The UKeiG demographic comprises academia, but also the private, commercial and public sectors, embracing schools, further and higher education, the NHS, healthcare and pharmaceutical industries, science, law, finance, arts, humanities, archives, museums and libraries.

UKeiG's most popular professional development courses include search tools and strategies, knowledge management, open access and research data management.

A key benefit of membership is that the CPD courses, meetings and networking forums provide "crossover" insight from one discipline to another. Members see UKeiG as a way of keeping up to date with trends and developments outside of their core, day-to-day business. Few other organisations provide this kind of cross-sectorial context and oversight.

Technical level

Although members rate themselves highly for technical awareness, they are typically users rather than creators of technology. Articles should not assume understanding of technical terms without explanation.

Length of article

Feature articles should be in the region of 1, 500-2, 500 words, but the editor is flexible on article length. Each article should be prefaced by a short summary/abstract.

What to write

The world is your oyster in terms of suggested themes and subjects as long as they reflect the disciplines and membership base articulated above. You should never assume that readers will be entirely familiar with your topic, so anything you can do to offer definitions, explanations, examples and context would be welcome. You should always hyperlink to suggested reading and alternative resources to enable readers to explore your article further.

While the obvious focus of the group is the UK electronic information sector, the industry, by its very nature, is global and international developments should be reported when they impact on the UK landscape.

The most valuable viewpoint you can give is that of a practitioner. While UKeiG welcomes theoretical debate, we are primarily a forum where peers can share their practical experiences and understanding. So, if something worked for you, tell the readership. If something didn't, tell the readership why not.

How to submit

Please e-mail your copy to the editor, Gary Horrocks at: *info.ukeig@cilip.org.uk* Articles should be delivered in a simple Word format. Hyperlinks to alternative/suggested content/further reading should be embedded in the text. Images are welcome if they illustrate a point or clarify a statement. Please send them separately, and also place them in the Word document in the appropriate sections. They may be in gif or jpeg formats.

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About you

Please provide a biographical paragraph about yourself, alongside an email address and job title/affiliation.

Editorial process

Your article will be copy-edited for spelling and for sense. If there are major changes to the article, we may return it to you for your comments and approval, but most articles require only light corrections before appearing in eLucidate, and do not need a further review by the author.