

How User Behaviour and Information Management are now Critical for IT Management

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Large scale Information Systems are more difficult and more expensive to develop than at any time in the history of computing. This is in part due to the considerable requirements now placed upon systems, for example, 24/7 working or near immediate processing of transactions, but also due to emerging issues around information architectures, data protection, cyber-security and human-computer interaction. The talk attempts to demonstrate how *user behaviour* and *information management* have grown as critical topics for those managing technology, perhaps as identified by researchers for some years. But both have emerged in rather unpredicted ways, well beyond the boundaries of IT systems.

Something About Me

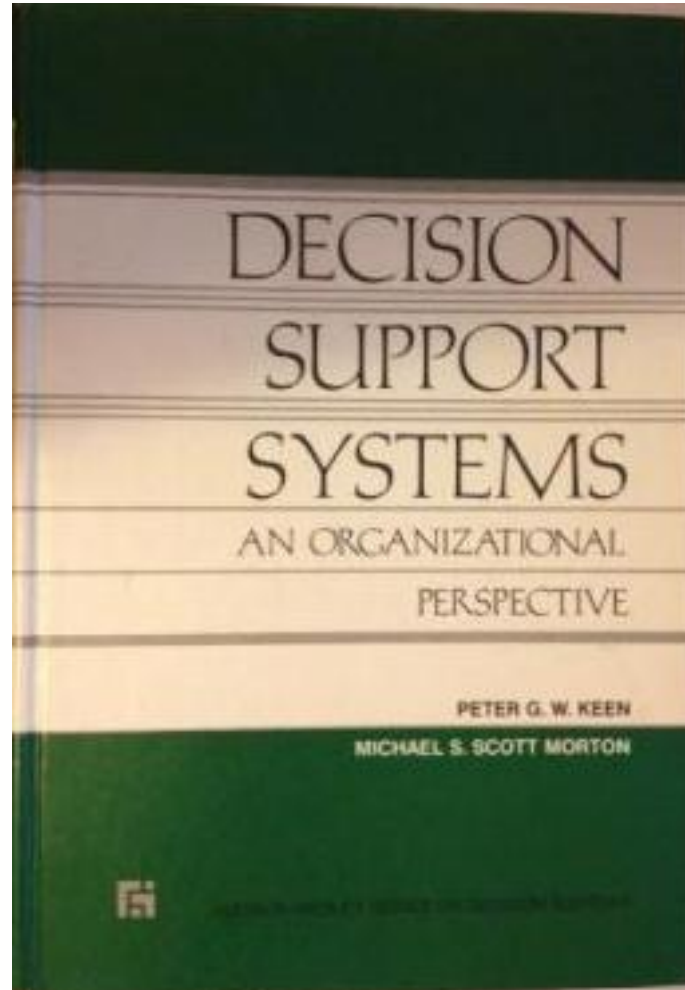
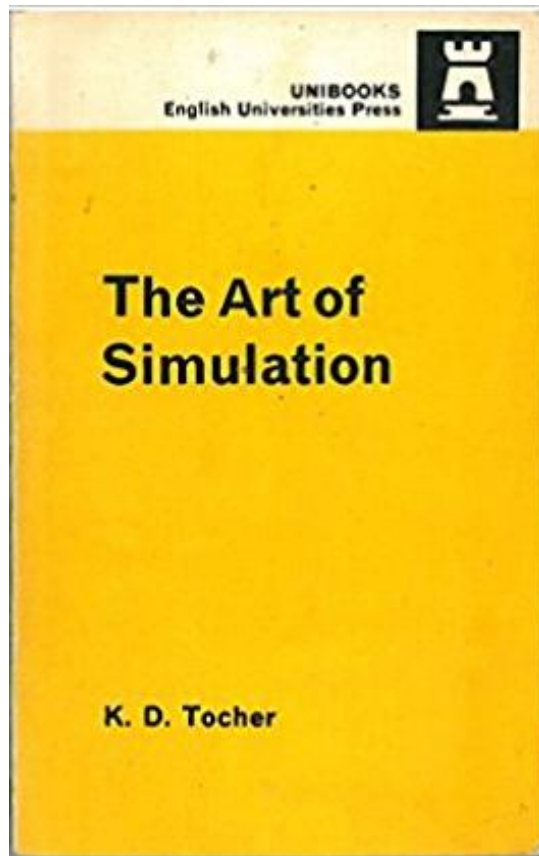


- Background in Management Science/OR/Information Systems. Research loosely within (what used to be called) Decision Support Systems (DSS).
- Realised that much work in DSS could be translated to supporting customers (see *Communications of the ACM* 41:3, 1998, 71-78).
- Long experience with empirical work, especially experiments (see *European Journal of Operational Research*, 249, 2016, 899–907).
- Editor, *European Journal of Information Systems*, from 2000-2006.
- Last 15 years in senior academic managerial roles.
- Currently have some responsibility for IT investments and governance (e.g., Chair the Cyber-security committee, Project Chair for Finance, Accommodation and other systems)

Tocher (1963) and Keen & Scott-Morton (1978)



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- Bring your own device.
- Instant processing.
- Immediate transactions.
- Fail-safe connections.
- Security.
- Privacy.
- Auditability.

Instant gratification: no one will wait for data, transactions, analysis, etc.

Complex IS: Big Data



If the Digital Universe were represented by the memory in a stack of tablets, in 2013 it would have stretched two-thirds the way to the Moon*

By 2020, there would be 6.6 stacks from the Earth to the Moon*

Source: EMC²
1 Zetabyte = 1 Trillion Gigabytes

Complex IS: Information Architectures

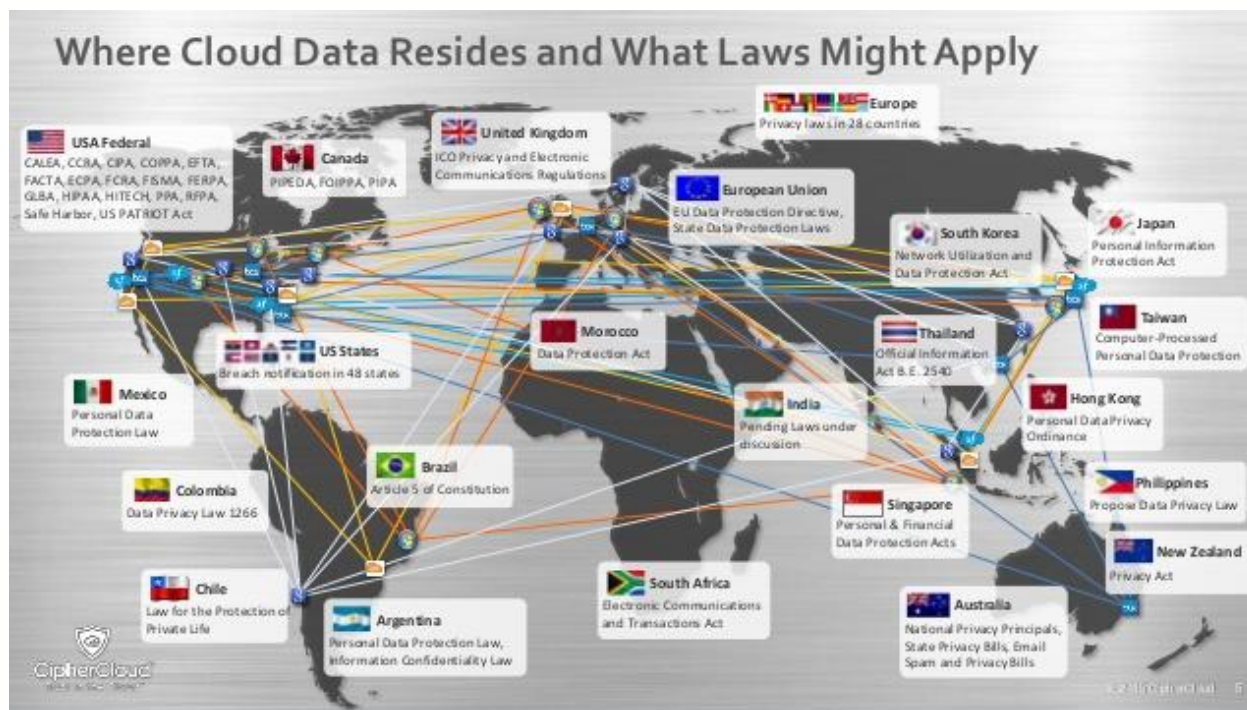


Information Architecture, and system interoperability, are still major problems for most IS estates.

Complex IS: Data Protection



Data Protection Act 1998



Data protection laws are (largely) national, varied, and open to interpretation, but almost all focus on the rights of individuals to (a) know what data is stored about them, and (b) expect that such data is used in a legal and ethical way, possibly requiring (c) informed consent.



10 Steps To Cyber Security



Defining and communicating your Board's Information Risk Management Regime is central to your organisation's overall cyber security strategy. CESG recommend you review this regime - together with the nine associated security areas described below - in order to protect your business against the majority of cyber threats.



Complex IS: Human-computer Interaction



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- From individuals to “crowds”.
- From given devices to bring-your-own.
- Multi-device, multi-factor interactions.
- From individual to shared experiences.
- The impact of unethical and illegal behaviour.
- Expectations of data protection and privacy.
- From loyalty to trust.
- From user behavior to the economics of behavior.

UK Vehicle Tax Discs Abolished (2014)



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News story

Vehicle tax disc abolished: changes you need to know

When you tax your vehicle, you won't get a tax disc.

Published 24 February 2014

Last updated 19 November 2014 — [see all updates](#)

From: [Driver and Vehicle Licensing Agency](#)

Costs of User Behaviour (2017)



Around £107m a year in road improvement revenue is being lost after DVLA reveals untaxed cars and vans on UK roads has surged to 700,000



Automatic Numberplate Recognition (ANPR)



Technology becomes a solution to a problem created by user behavior, which in turn creates (a) more data and (b) privacy concerns.

User Behaviour in Cyber-security (2017)



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SPOOF





- *What is it?*
- Technical: databases.
- Meta-technical: ontologies, meta-data, inter-operability.
- Document management: version control, SharePoint.
- Personal: information overload, communication tools.
- Enterprise Information Management: SAP, supply-chains, etc.
- Specialist: Accounting information, Healthcare information, etc.
- Knowledge management.



EU General Data
Protection Regulation
25 May 2018



- Increased Territorial Scope
- Penalties
- Consent
- Breach Notification
- Right to Access
- Right to be Forgotten
- Data Portability
- Privacy by Design
- Data Protection Officers

Data may not be processed unless there is at least one lawful basis to do so:

- The data subject has given consent to the processing of personal data for one or more specific purposes.
- *(Other situations, including contractual obligation and public interest.)*

GDPR provides a basis for organizational Information Management.



Bloomberg QuickTake • Analysis

Understanding the Facebook-Cambridge Analytica Story: QuickTake

By Michael Riley, Sarah Frier and Stephanie Baker | **Bloomberg** April 9 at 1:27 PM

No stranger to public discontent, Facebook Inc. is digging out of one of its biggest crises yet. The personal data of up to 87 million users, mostly in the U.S., was obtained by an analytics firm that, among its other work, helped elect President Donald Trump. In response to that revelation, lawmakers and regulators in the U.S. and U.K. increased their scrutiny of the social media giant, and at least some Facebook users canceled their accounts. The uproar has only added to the pressure on Facebook and Chief Executive Mark Zuckerberg over how the company was used during the 2016 presidential campaign to spread Russian propaganda and phony headlines.

1. Who took what from Facebook?

During the summer of 2014, the U.K. affiliate of U.S. political consulting firm Cambridge Analytica hired a Soviet-born American researcher, Aleksandr



- User behavior has changed from “usability” (although still important) to dealing with humans as economic and social agents.
- *Social psychology and behavioural economics are now dominant approaches to research.*
- Information Management, through GPDR, has reemerged in practice from a legal and governance perspective.
- *We need to return to the fundamentals of information, and teach this to students.*

The boundaries of Information Systems are more fluid and difficult to determine than ever.

Another Book!



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*The Information:
A History, a
Theory, a Flood*

James Gleick



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