



Internet of Things – and what it means for information and publishing

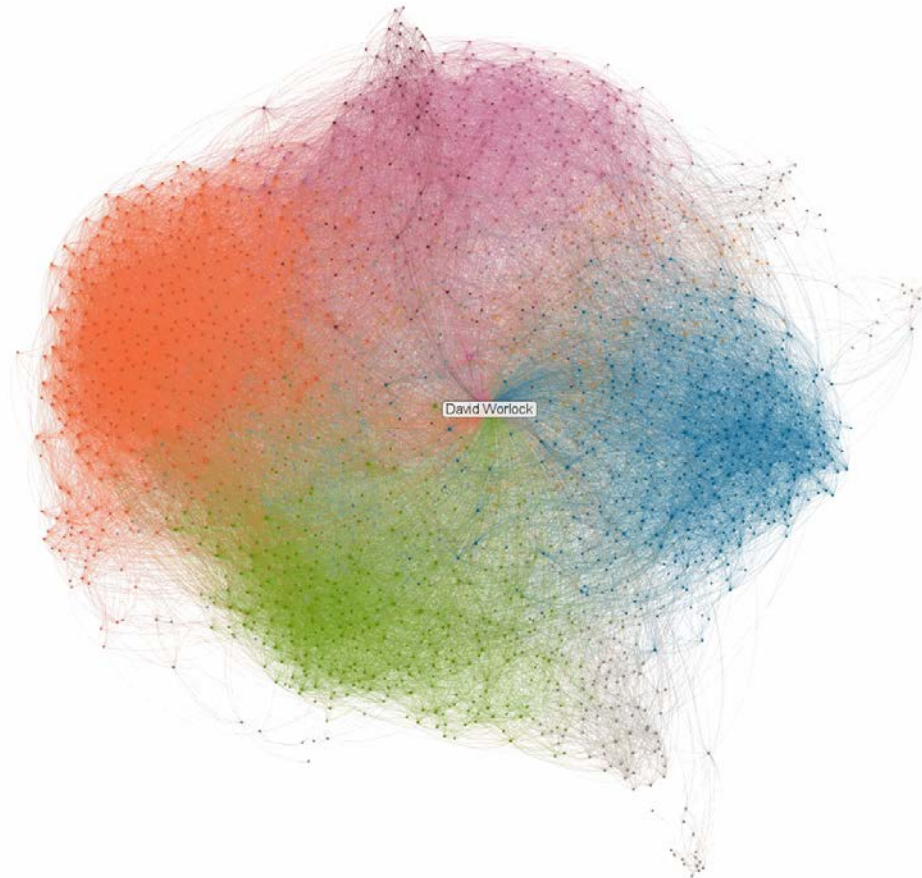
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Publishers' Forum, Berlin

April 2015

You are what you are visualised to be?

LinkedIn Maps David Worlock's Professional Network
as of May 17, 2013



©2013 LinkedIn - Get your network map at inmaps.linkedin.com

The view from the HIPPO

**Highly Important
Person with
Pronounced Opinions
(big mouth, small ears)**



Internet of Things?



Industrial Internet



Internet of Everything



The Embedded Internet

Describing the World – to a Machine

- Data
- Metadata
- Ontology and the Semantic Web
- AND THEN?
- Physical mark-up, geolocation, tagging and tracing from sensors to RFID



Marvin Minsky

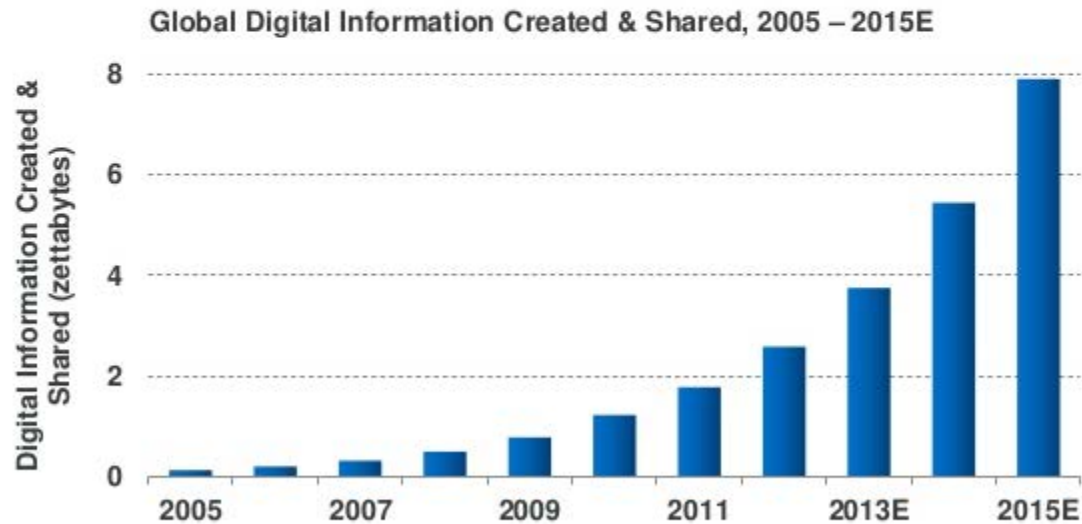


“The surprising thing about 2010 was that they had all those books in their libraries, but none of the books could talk to each other”

We are the publishers now!

World's Content is Increasingly Findable + Shared + Tagged -
Digital Info Created + Shared up 9x in Five Years

*Amount of global digital information created & shared
– from documents to pictures to tweets –
grew 9x in five years to nearly 2 zettabytes* in 2011, per IDC.*



KPCB

Note: * 1 zettabyte = 1 trillion gigabytes. Source: IDC report "Extracting Value from Chaos" 6/11. 11

Science Drives Change

- Robotics
- AI
- 3D Printing
- Synthetic biology and the biochemistry revolution

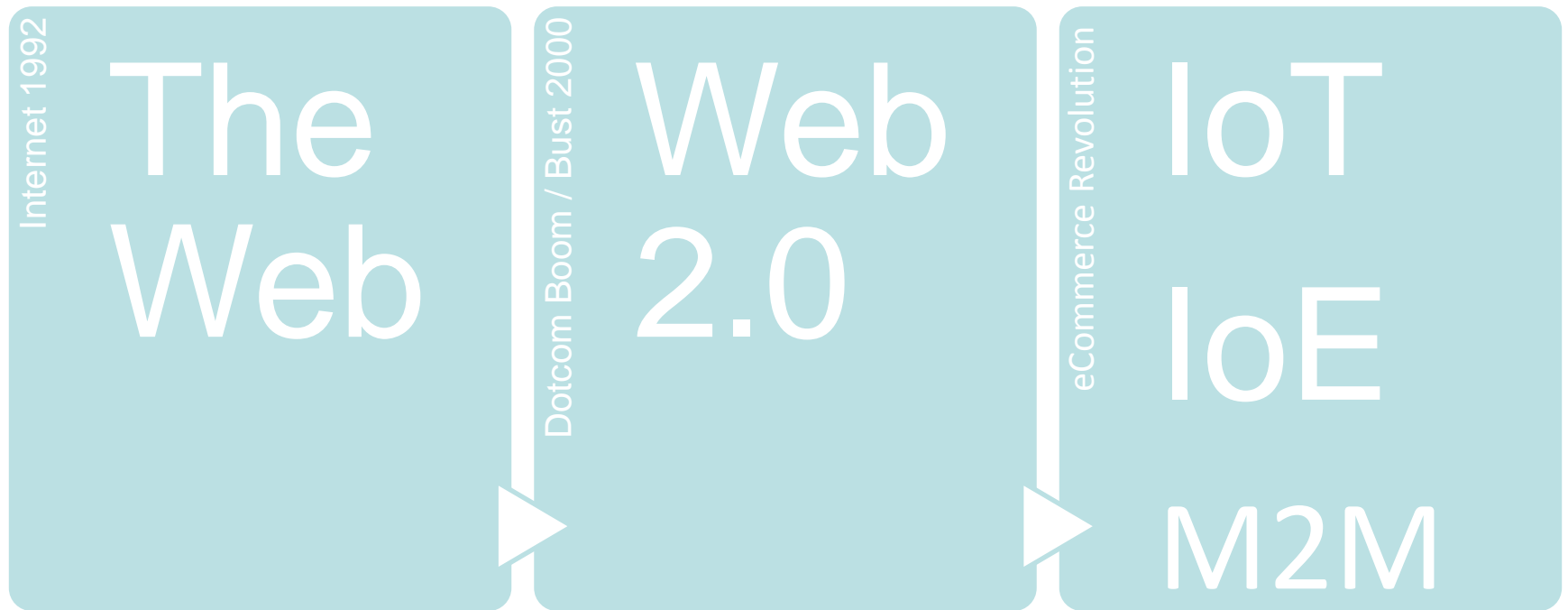


Productivity Exploits Change

- Automated journalism
- Additive manufacturing
- The power of logistics
- Predictable climate
- Greater control of risk



Where have we come from?



Where are we Going?

- 25 billion devices connected 2015; 50 billion by 2020
CISCO
- Value at stake (net profit) created from 2014-2020 is \$14 trillion - 21% of global corporate profits CISCO
- From 2 billion objects in 2006 to 200 billion by 2020
INTEL
- US productivity grows by an additionally 1 to 1.5% pa
GE
- 3 billion information subscribers, 1.5 billion vehicles, 3 billion utility meters, 100 billion new processors added to the network by 2020 ERICSSON

Who is going with us?



The Real Thing – Human Augmentation?

- NOT just smart meters and self drive cars
- NOT just a revolution in manufacturing
- NOT just a massive boost for productivity – and a social revolution in employment
- BUT a major change in the way people behave, communicate and relate to each other

VIRTUAL BECOMES THE NEW REALITY?

Workflow

- Context-orientated world – congestion pricing
- Business M2M world – credit rating, contract scrutiny, buying decision
- Consumer world – Uber and Google Now
- Educational world – learning driven by learners and their collaboration
- Research world – Big Questions, Big Data

What would you know if...

- You knew who had bought every book?
- And where they lived?
- And whether they had read it?
- And what they had ever said about it on social media?
- And what they bought next as a result?



AND how to turn this data into Knowledge

Actionable Personalization

- Automated Insights/Narrative Science
- “Machine to Me” becomes M2M
- News and Analysis drives Action and Solution
- Where – Commodity trading (Genscape), logistics, industrial research (natural resources exploration)



“Publishing morphs into data analysis”

Education becomes Learning

- Teachers create content and share it
- Learners learn in machine-based environments using games and collaboration
- Learning is increasingly personalised, adaptive and driven by diagnosis derived from data (Knewton)
- Teacher is mentor; publisher does data collection, diagnostics, reporting to government/parents

STM: the new publishing paradigm

- Publishing is what researchers do
- Curation is what publishers do
- What happened to librarians?
- Publishing becomes research process support
- All content must be available to all researchers at all times
- Tools, analytics and metrics support growth and drive change



Publishers of Tomorrow?

- Context Relevant – behavioural analysis by machines that learn
- Scaled Inference – “the Google Brain for everyone”
- MetaMind – Deep Learning for everyone!
- Vicarious – “brings us closer to a future where machines perceive, imagine and reason just like humans”
- And also – Sentient, Nara “Korcha et al”



Do we know how to make it work?

- IIC Industrial Internet Consortium: 21 countries
- Plus Cisco, IBM, Intel and 167 companies
- AllSeen Alliance Linux Foundation plus Microsoft, LG, Panasonic, Electrolux, Haier, Sharp, Sony and others

Thanks for listening!

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