



INTERNATIONAL ASSOCIATION OF SCIENTIFIC, TECHNICAL & MEDICAL PUBLISHERS

Future Lab Tech Trend watch 2013

Tech Trends as identified by the STM Future Lab
Committee

On 6 December 2012, London

Report: Gerry Grenier, Eefke Smit, Dave Martinsen

These STM Tech Trends for 2013 result from a Delphi-style brainstorm by the STM Future Lab Committee at the end of 2012 on technology-related developments likely to have a high impact on the STM business in the coming year. Present at the meeting, held in London on 6 December 2012:

Gerry Grenier (IEEE - Chair)

Eefke Smit (STM - notes)

Dave Martinsen (ACS - notes)

John Shaw (Sage)

John Sack (Highwire)

Sam Bruinsma (Brill)

Daniel Schiff (Thieme)

Paul Peters (Hindawi)

Thomas Mager (Springer)

Terry Hulbert (AIP)

David Smith (CABI)

James Walker (IoPPublishing)

IJsbrand Jan Aalbersberg (Elsevier)

Kent Anderson (IJJ&B)

Richard O'Beirne (OUP)

Jeremy Macdonald (Nature Publ Group)

Steve Boyer (IBM)

Input via email:

Gillian Howcroft (Taylor and Francis)

Craig van Dyke (Wiley)

Web-redesign for a Hybrid Reading Experience: multi-device information flows, what happens to PDFs?

USE CASES
NEEDED,
MULTI-DEVICE,
MULTI-CONTEXT

Epub3

New PDF

What will happen to the PDF
demise or resurrection?

HTML

CONTENT PLATFORM
COUNTS LESS AND LESS

Impact of Mendeley,
Colwiz, ReadCube

Format for VoR

FOR DIGITAL DELIVERY ONLY?

Info via emails

Send-to-Kindle

PDF no longer replica of print

Info in PDFs

Many platforms, many devices, many individual workflows

Mobile
Productivity

HYBRID READING EXPERIENCE

Submission System
Innovation

Knowledge
graphs

Smartphone

Info via apps

Geolocation services

Article of the Future =
Article+Data+Semantics

Information in
Context

API Standards

Internet-of-Things

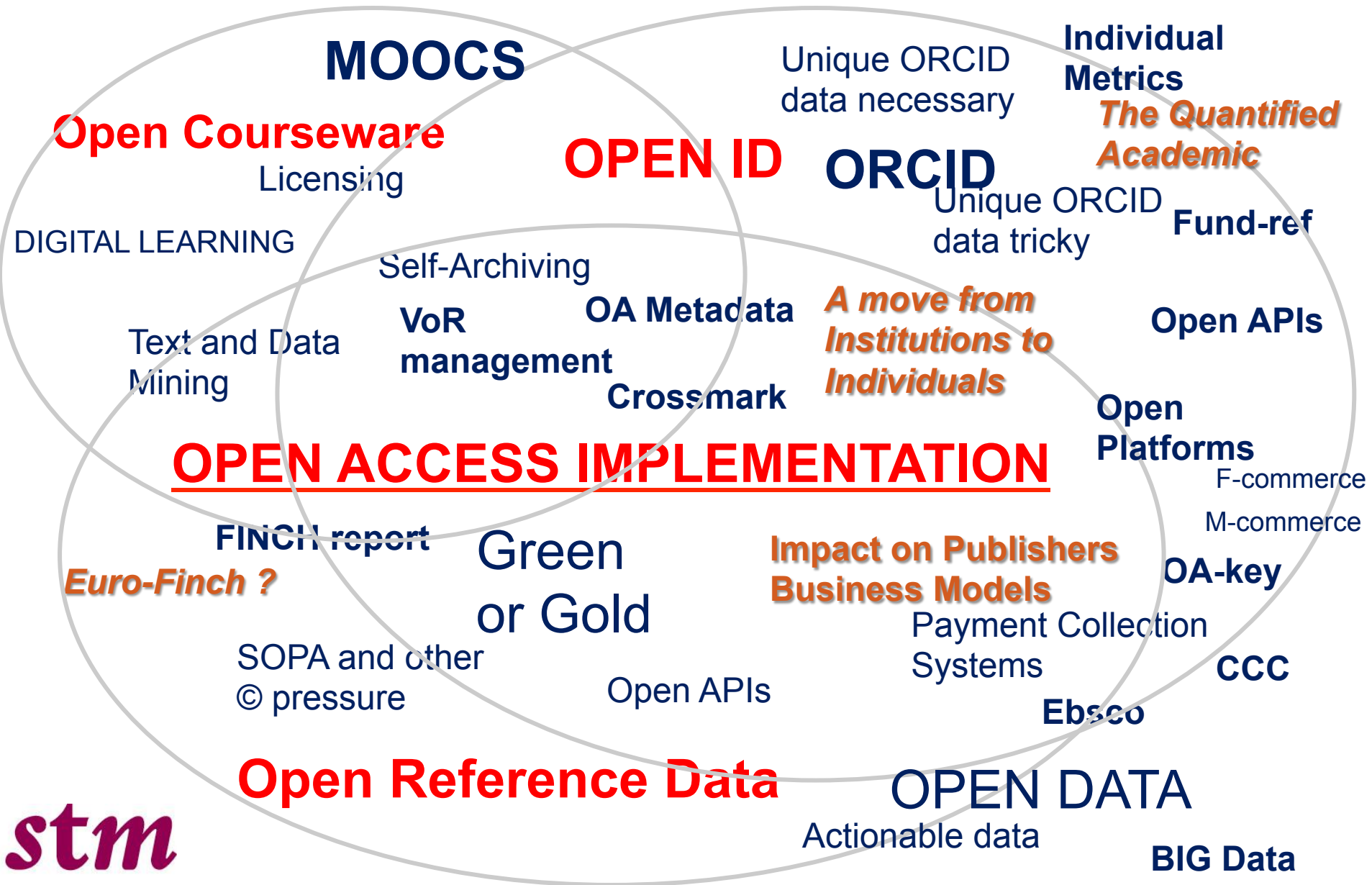
Serendipitous
search

What is reading, how is info
treated in these workflows?

stm

The IU is dead, long live many multiplied, device dependent UI's

'Open' is here to stay, now is how to implement



Validation, Verification, Curation, Mining and Data: From Validation to Augmentation

Analytics for the online eco-system

Data citation

Data curation

TURN DATA INTO MAPS

DATA

Data mining

CrossQuarry

CHANGING HOW PEOPLE READ JOURNALS

Reliability

Data peer review

CURATION AND ANALYTICS

Quality Assurance

What is the minimal NUGGET in an article?

Triple Stores, RDF's

Mining of references

Improving Data from others

FROM VALIDATION TO AUGMENTATION

Assertion Tables with falsification/ verification statements

CROWD VALIDATION

HARD SHELL VERSUS SOFT SHELL APPROACH

Augmenting Manuscripts via submission systems

Transparent Validation Tools

ANALYTICS IN THE ONLINE-ECOSYSTEM

THE QUANTIFIED ACADEMIC

Altmetrics, New Metrics

Where is the innovation of manuscript submission systems?

THE NEW IMPACT FACTOR

What happens to Peer Review ?

We see 3 Overarching Trends

1. From the Institution to the Individual

Information moves from central platforms and libraries (come and get it) to a multitude of personal devices (delivered)

This requires information flow redesign, based on new concepts of 'hybrid reading'

2. From Closed to Open

Business models move from institutions to individuals (author pays)

This requires Open Access Implementation strategies and a move from libraries to individuals

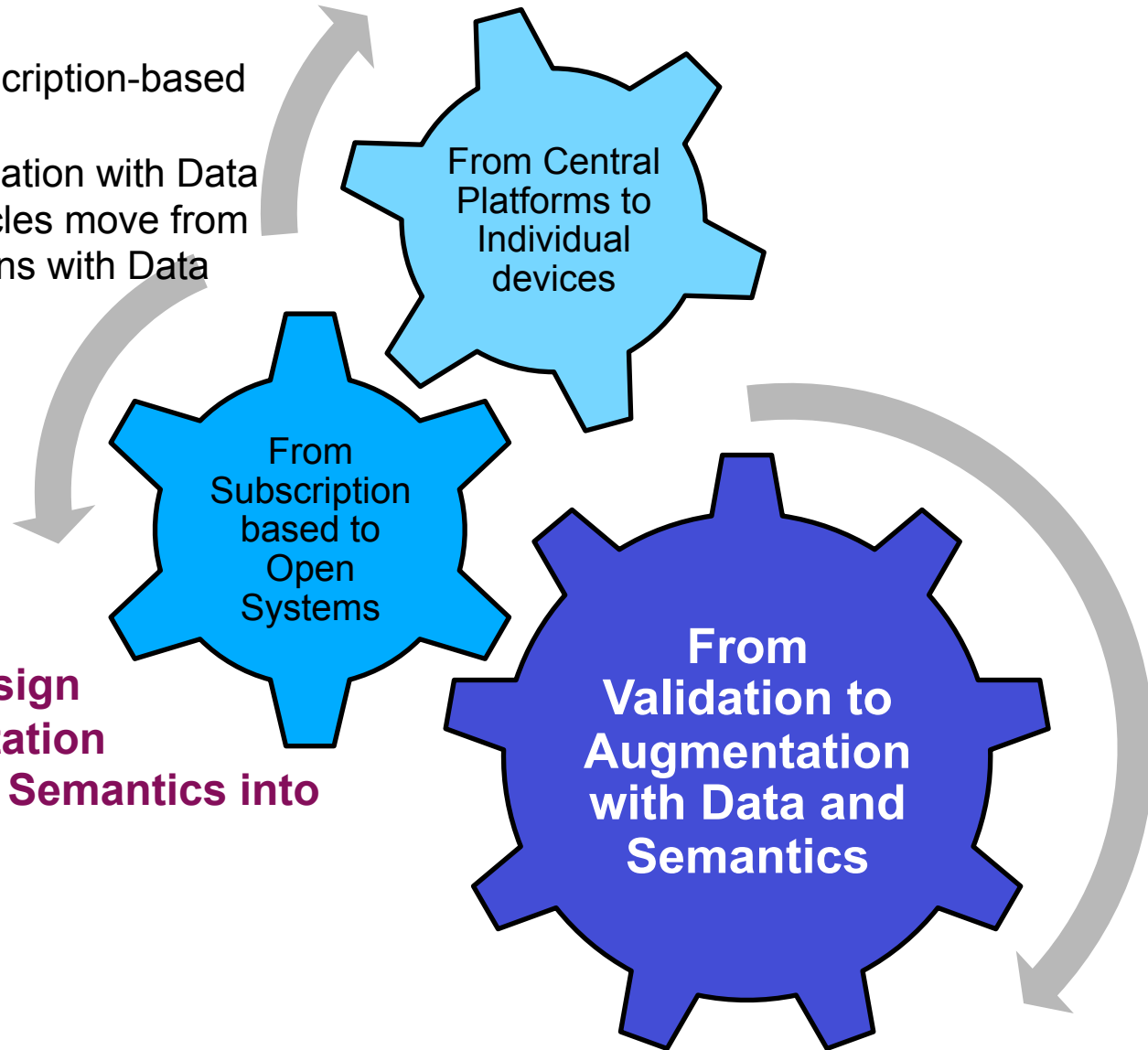
3. From Validated Articles to Augmented Information with Data and Context

Traditional article moves to augmented versions with data and semantics

This requires integration of data and publications, and new ways of information-in-context by adding semantics

Three Overarching Trends

1. From Institutions to the Individual: Information moves from central platforms to a multitude of individual devices
2. From closed to open: from subscription-based to author-pays models
3. From Full Text Articles to Information with Data and Context: Traditional articles move from full text to augmented versions with Data and Semantics



This requires:

1. Information Flow Redesign
2. Open Access Implementation
3. Integration of Data and Semantics into Publications