Preserving our Digital Heritage: Community Action via UK LOCKSS Alliance

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EDINA, University of Edinburgh

The LOCKSS Software

- **Distributed** Digital Preservation System
- Open source peer to peer software
- Standards:
  - OAIS, OpenURL, HTTP, WARC

A LOCKSS Box is a Digital Bookshelf

Preserving Web Published Content

...journals, books, blogs, web sites, scanned files, audio, video animations, social science datasets, moving images, still images, software, sound, text, e-thesis & dissertations, images, government documents...

400+ Participating Publishers

RSC Publishing

OXFORD UNIVERSITY PRESS

Drogo Research
International Journal of Psychiatric Nursing Research

ANNUAL REVIEWS
Intelligent Synthesis of the Scientific Literature
Nonprofit Publisher of the *Annual Review of* ™ Series

Emerald

Hodder Arnold
www.hoddereducation.co.uk

Taylor & Francis Group
an informa business

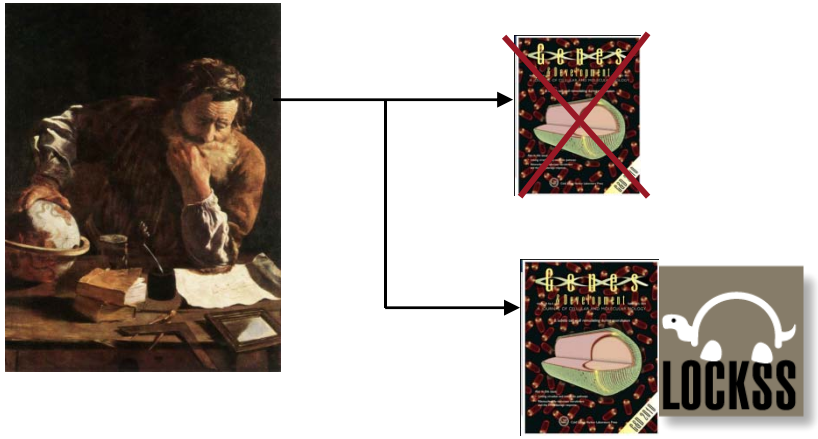
BERG

DCC LOCKSS

EDINA®

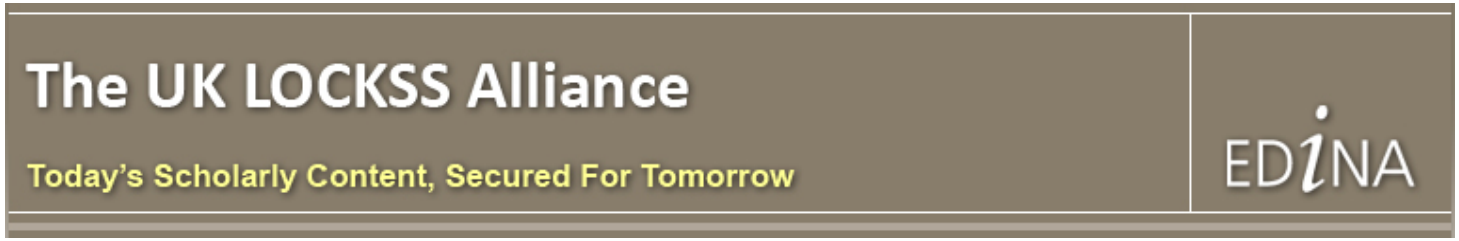
Continuing Access

- Access in short term and long term



- Continuing access following cancellation
- Access is not dependent upon continuing membership

UK LOCKSS Alliance



- *The UK LOCKSS Alliance is a co-operative organization whose goal is to ensure continuing access to scholarly work in ways that are sustainable over the long term.*

- LOCKSS allows libraries to be involved in the development of journal preservation infrastructure and collections.
  - EDINA offers underlying technical support and coordination

Thinking about the role of the library

- A library's task is to manage risk in order to ensure long term preservation and access

- In the past, libraries purchased paper copies of scholarly journals and stored them. In the present, they purchase access to online copies and store nothing

The role of LOCKSS

- For those institutions that wish to have **custody** and **control** over the scholarship that is generated and used by their faculty, students, and staff.
- UK LOCKSS Alliance helps libraries care for material that hasn't been cared for sufficiently

Successful Preservation

There is a strong tie between the oversight and involvement of the library community and successful preservation.

Print Collections

Are an **effective decentralized** preservation system

- Many copies of most things
- Scattered around the world
  - Held under different legal regimes
  - Held under different administrative regimes
- Distributed responsibility reduces risk of accidental loss

Threats to Digital Content

- Media failure
- Hardware failure
- Software failure
- Network failure
- Format obsolescence
- Natural disaster

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- Media failure
- Hardware failure
- Software failure
- Network failure
- Format obsolescence
- Natural disaster
- Operator error
- External attack
- Insider attack
- Economic failure
- Organization failure

Countering these threats

- Build upon the principles and stability of the library

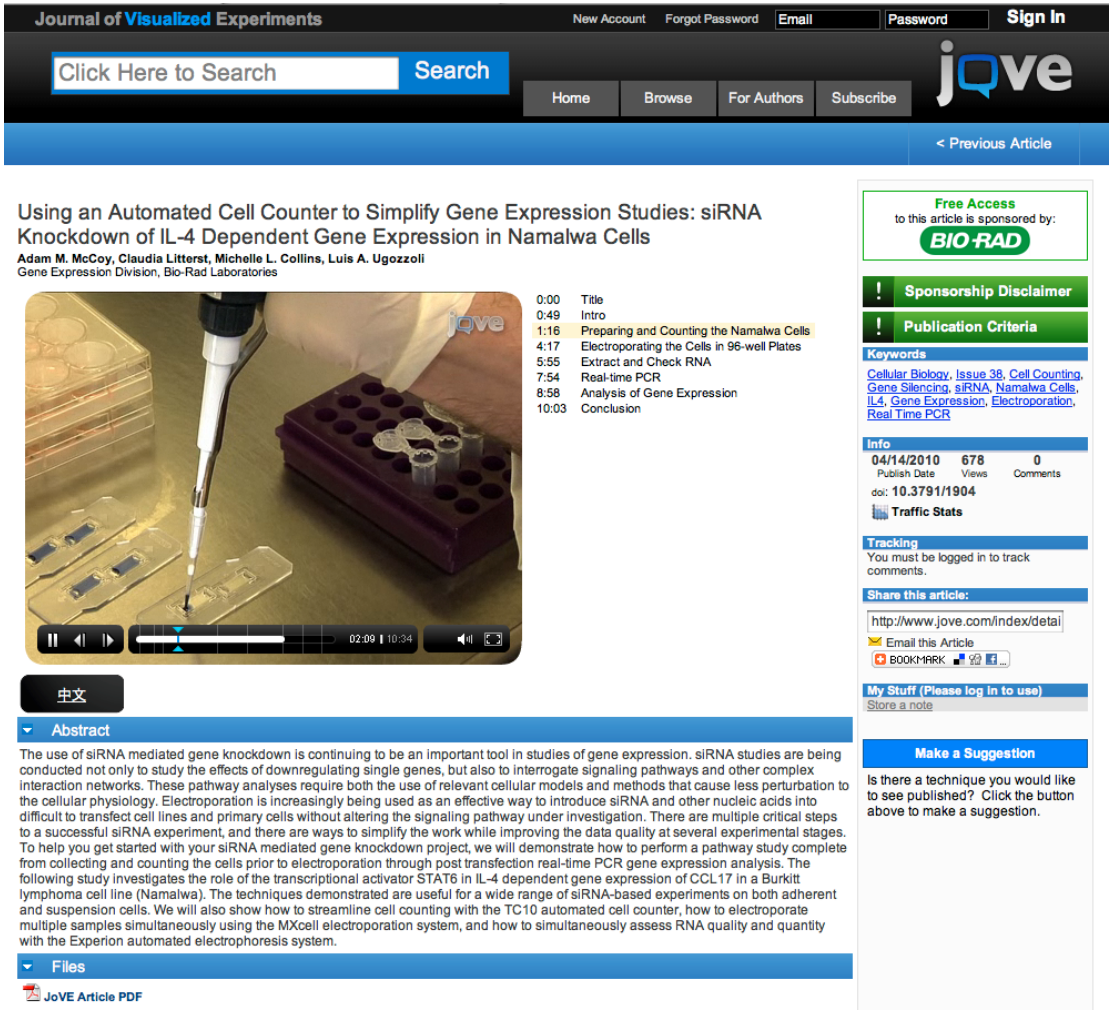
How LOCKSS Works

LOCKSS: Modern technology meets the decentralization and local control model of print collections.

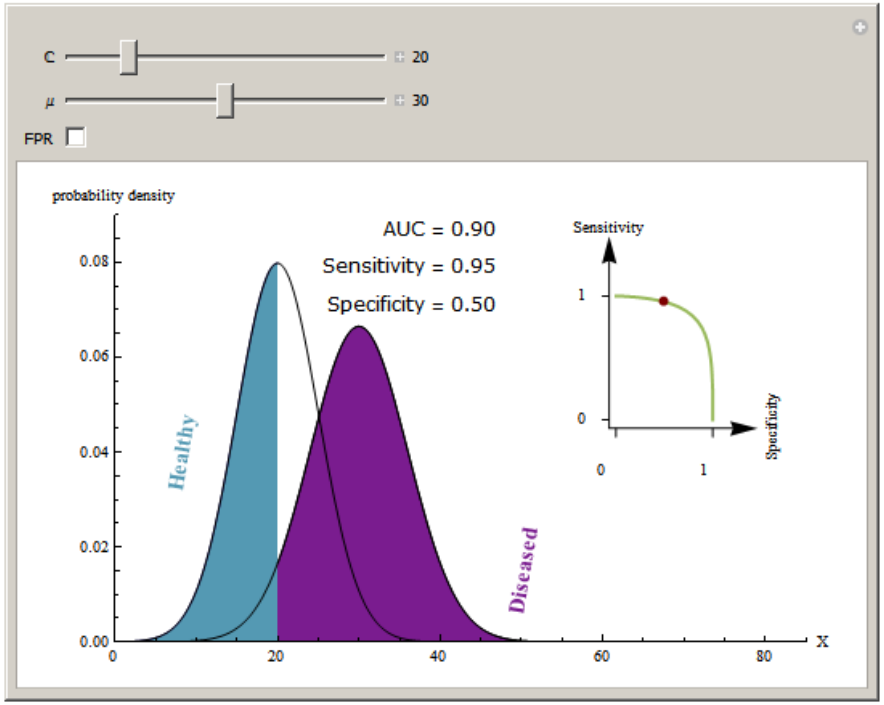
What is

“Intellectual Content”?

Intellectual Content



Intellectual Content



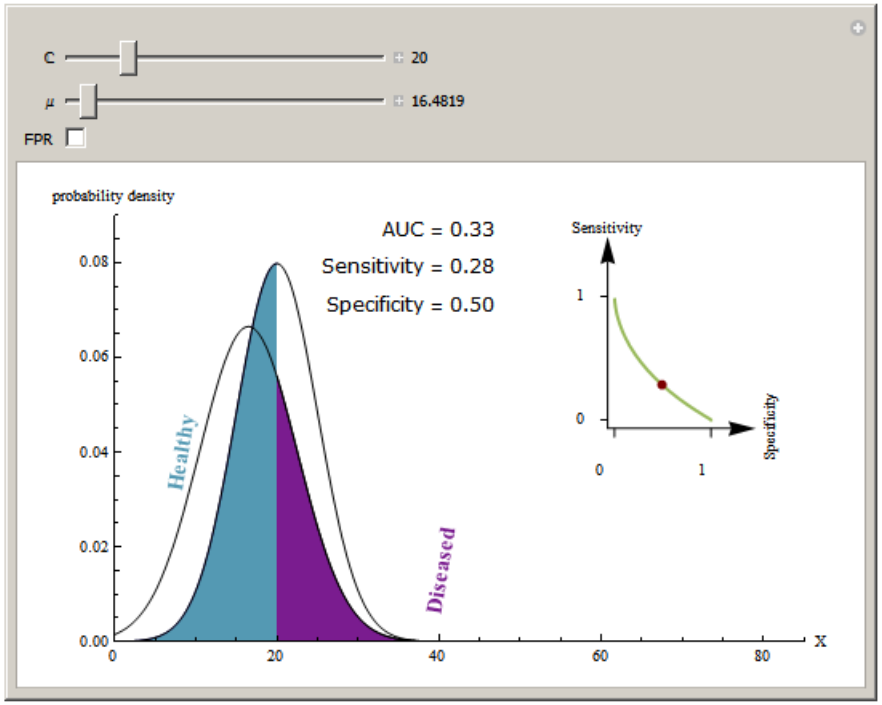
Visually the ROC curve, shown in the top-right corner, is the shaded area under the right curve versus the shaded area under the left curve as the threshold parameter $\mathbb{C}$ varies. A more detailed explanation now follows.

Let X be a possible medical diagnostic for disease. For example, X, could be eye pressure and the disease could be glaucoma. We suppose that the distribution of X in healthy people is $N(20, 5)$ and in the diseased population it is $N(\mu, 6)$, where $\mu > 20$. These curves are shown on the left. The receiver operating characteristic (ROC) curve can be used to visualize and quantify how useful X is in the detection of this disease. We suppose that people are diagnosed healthy or diseased according as $X < \mathbb{C}$ or $X \geq \mathbb{C}$. In the above diagram, we show the case where $\mu = 30$ and $\mathbb{C} = 20$. The ROC curve plots sensitivity versus specificity, where

sensitivity = $\Pr\{X \geq \mathbb{C} \mid \text{diseased}\}$ = purple area in plot,

specificity = $\Pr\{X < \mathbb{C} \mid \text{healthy}\}$ = blue area in plot.

Intellectual Content



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UK LOCKSS Alliance Members

- University of Birmingham
- University of Bristol
- De Montfort University
- Durham University
- Edinburgh University
- Glasgow University
- University of Huddersfield
- University of Hull
- King's College London
- Leicester University
- London School of Economics
- University of Newcastle Upon Tyne
- University of Sussex
- University of St Andrews
- University of Warwick
- University of York

Publishers Give Permission

Pain Reviews

ISSN 0968-1302, Online ISSN: 1477-0318
Ceased publication in December 2002
visit publication homepage

Hodder Arnold
www.hoddereducation.co.uk

This journal has ceased publication and will be removed from IngentaConnect in October 2009. The content will be avaliable via LOCKSS.

LOCKSS system has permission to collect, preserve, and serve this open access Archival Unit.

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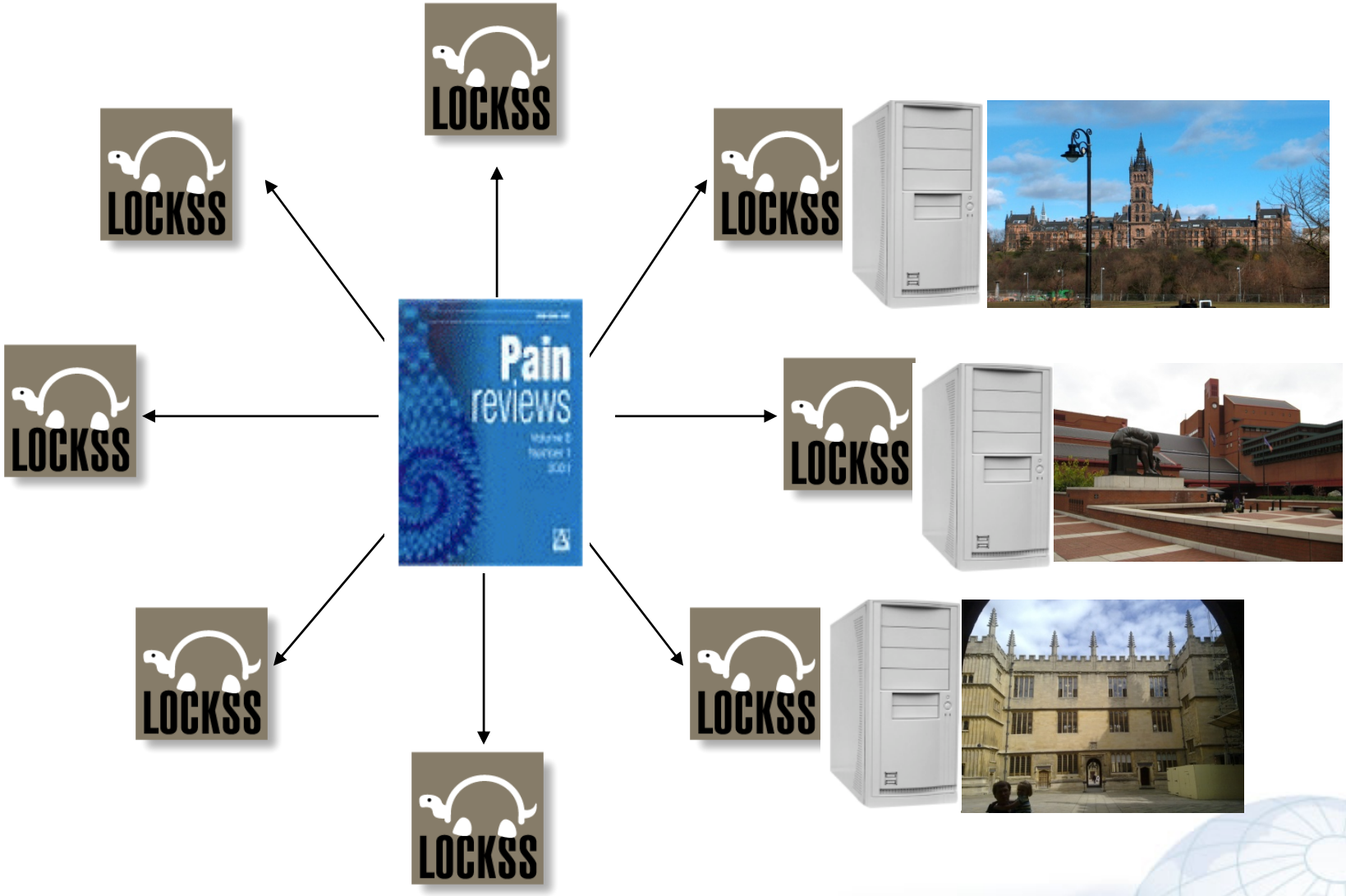
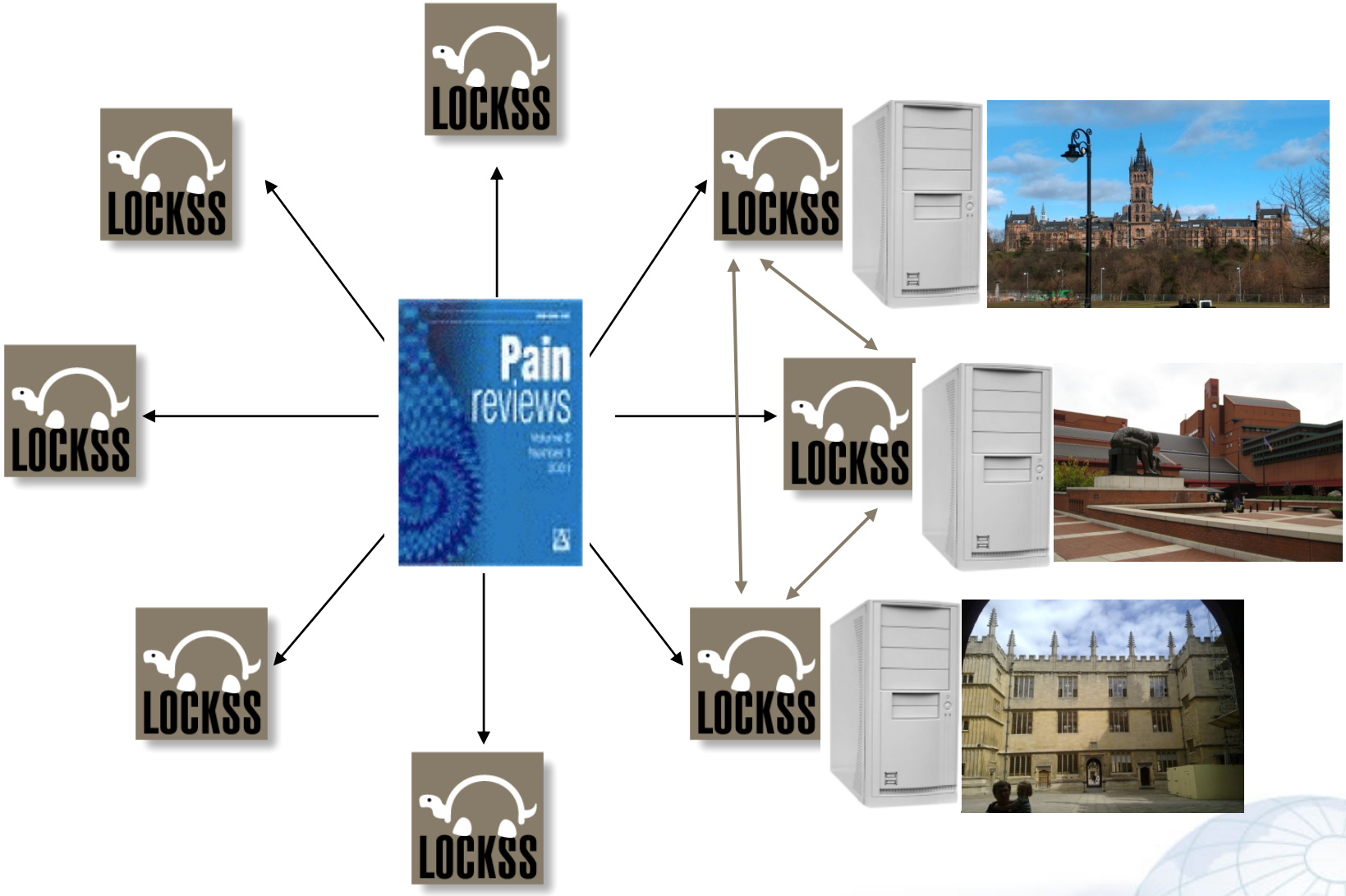
Publisher: Hodder Arnold Journals

Independent Collection



Independent Collection



Library participation in the UK LOCKSS Alliance

- Share information on local practices
  - Usage of LOCKSS within institutions
  - Preservation policies of institutions
  - How activity is managed within an institution
- Share information on collection management policies

- The UK LOCKSS Alliance focuses on content that is of local interest, and that members do not feel has been cared for sufficiently.

Governance of the UK LOCKSS Alliance

- Steering Committee
  - Tony Kidd (University of Glasgow)
  - Geoff Gilbert (University of Birmingham)
  - Phil Adams (De Montfort University)
  - Lisa Cardy (London School of Economics)
  - Liz Stevenson (University of Edinburgh)

  - Lorraine Estelle (JISC Collections)
  - Peter Burnhill (EDINA, University of Edinburgh)
  - Adam Rusbridge (UK LOCKSS Alliance Coordinator)

- Supported by:
  - William Nixon (University of Glasgow)
  - Laura Roy (University of Glasgow)
  - You!

Steering Committee Activities

- Collection Management Policies
  - What content is of priority and at-risk
- Community Outreach
  - Supporting other libraries
  - How to contribute to national policy
- Technical Operation and Development
  - Usage of LOCKSS within institutions
- Finance, Activity and Resources
  - Achieving a sustainable organisation

Get involved in the UK LOCKSS Alliance

Participation Information

http://www.jisc-collections.ac.uk/catalogue/lockss

JISC Band	Annual Fee
A	£5,000
B	£3,750
C	£2,750
D	£2,250
E-F	£1,800

Strong foundations for Archives

- Decentralized, distributed, and redundant
- Responsibility spread across the community
  - Built upon a strong organisational foundation
- Shepherded by strong universities with strong libraries

Principles of LOCKSS

- Local access, control, and custody of content
- Permanent access to content without continued fees
- Spreading the archive over multiple libraries, multiple nodes, multiple voices

Benefits of LOCKSS

- Mitigates risk from accidental damage
- Affordable
- Preserves historical context

- Allows universities to take responsibility for action and contribute to policy development
- UK LOCKSS Alliance ensures that the UK can preserve all scholarly content of interest
  - From publishers both large and small

What You Can Do

- Take control of your own content for yourself
- Put your content in “lot of places”
- Put LOCKSS permission statements so others can preserve it
- Contribute to the UK LOCKSS Alliance and influence policy decisions
- Consider the organisational and social requirements of archiving
  - How can the UK best respond to the challenges?

It’s Up To You

“In the future, might access to your current scholarship disappear completely?”

- Ensure important content is preserved
- Build collaborative infrastructure and contribute to the governance of archives
- And keep content safe for the very long term.

Thank you for listening

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