

# Preserving our Digital Heritage: Community Action via UK LOCKSS Alliance

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# 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,  
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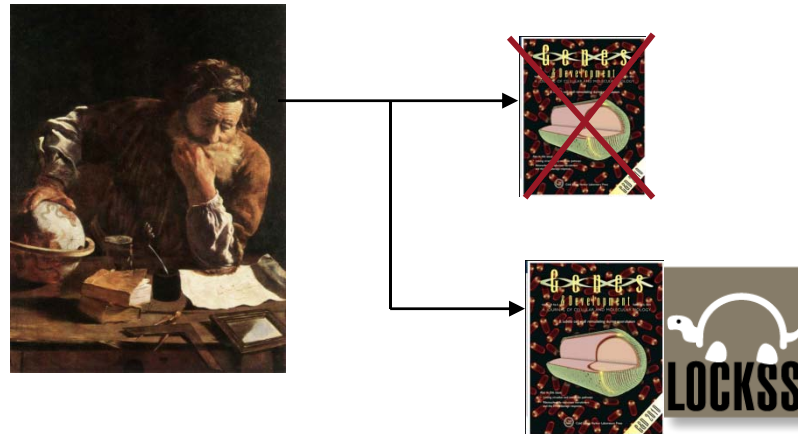
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# Continuing Access

- 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

Today's Scholarly Content, Secured For Tomorrow

EDiNA

- *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.

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

# Threats to Digital Content

- 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.

## “Intellectual Content”?



# Intellectual Content

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## Using an Automated Cell Counter to Simplify Gene Expression Studies: siRNA Knockdown of IL-4 Dependent Gene Expression in Namalwa Cells

Adam M. McCoy, Claudia Litterst, Michelle L. Collins, Luis A. Ugozzoli  
Gene Expression Division, Bio-Rad Laboratories



0:00 Title  
0:49 Intro  
1:16 Preparing and Counting the Namalwa Cells  
4:17 Electroporating the Cells in 96-well Plates  
5:55 Extract and Check RNA  
7:54 Real-time PCR  
8:58 Analysis of Gene Expression  
10:03 Conclusion

中文

Abstract

The use of siRNA mediated gene knockdown is continuing to be an important tool in studies of gene expression. siRNA studies are being conducted not only to study the effects of downregulating single genes, but also to interrogate signaling pathways and other complex interaction networks. These pathway analyses require both the use of relevant cellular models and methods that cause less perturbation to the cellular physiology. Electroporation is increasingly being used as an effective way to introduce siRNA and other nucleic acids into difficult to transfect cell lines and primary cells without altering the signaling pathway under investigation. There are multiple critical steps to a successful siRNA experiment, and there are ways to simplify the work while improving the data quality at several experimental stages. To help you get started with your siRNA mediated gene knockdown project, we will demonstrate how to perform a pathway study complete from collecting and counting the cells prior to electroporation through post transfection real-time PCR gene expression analysis. The following study investigates the role of the transcriptional activator STAT6 in IL-4 dependent gene expression of CCL17 in a Burkitt lymphoma cell line (Namalwa). The techniques demonstrated are useful for a wide range of siRNA-based experiments on both adherent and suspension cells. We will also show how to streamline cell counting with the TC10 automated cell counter, how to electroporate multiple samples simultaneously using the MXcell electroporation system, and how to simultaneously assess RNA quality and quantity with the Experion automated electrophoresis system.

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Publication Criteria

Keywords  
[Cellular Biology](#), [Issue 38](#), [Cell Counting](#), [Gene Silencing](#), [siRNA](#), [Namalwa Cells](#), [IL4](#), [Gene Expression](#), [Electroporation](#), [Real Time PCR](#)

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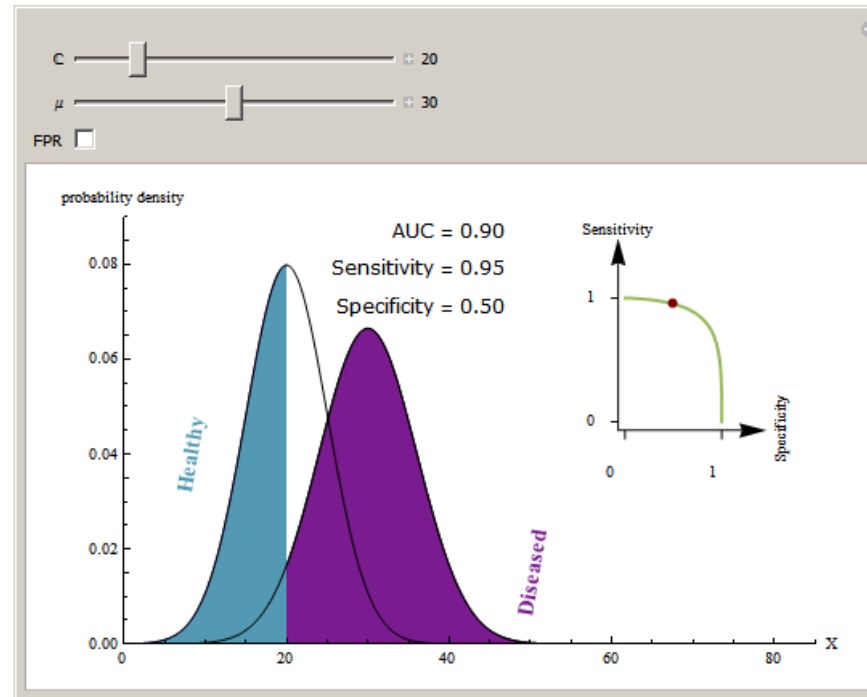
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# Intellectual Content



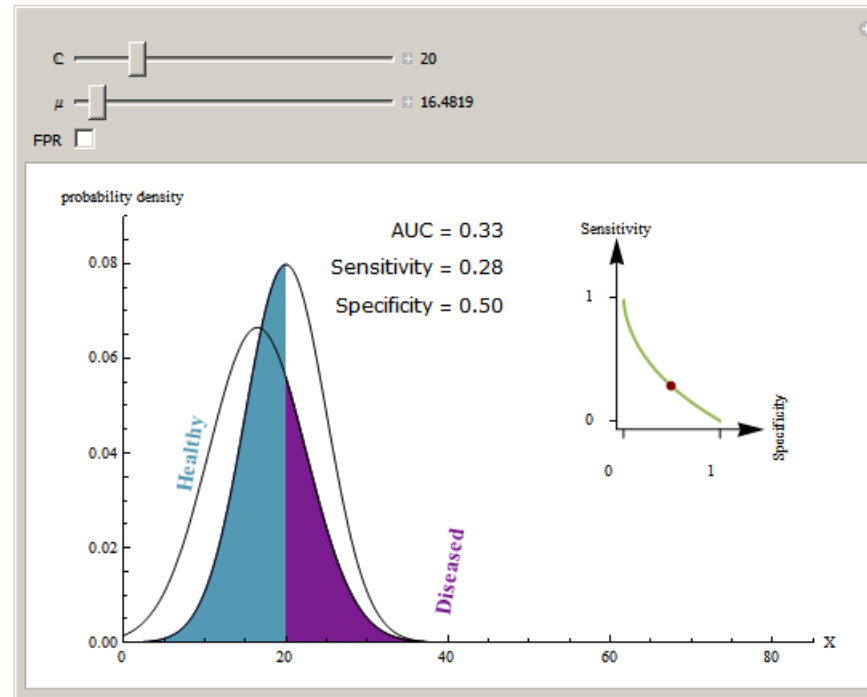
Visually the ROC curve, shown in the top-right corner, is the shaded area under the right curve versus the shaded area under the left curve as the threshold parameter  $C$  varies. A more detailed explanation now follows.

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  $X < C$  or  $X \geq C$ . In the above diagram, we show the case where  $\mu = 30$  and  $C = 20$ . The ROC curve plots sensitivity versus specificity, where

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

specificity =  $\Pr\{X < C \mid \text{healthy}\}$  = 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](http://www.hoddereducation.co.uk)

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

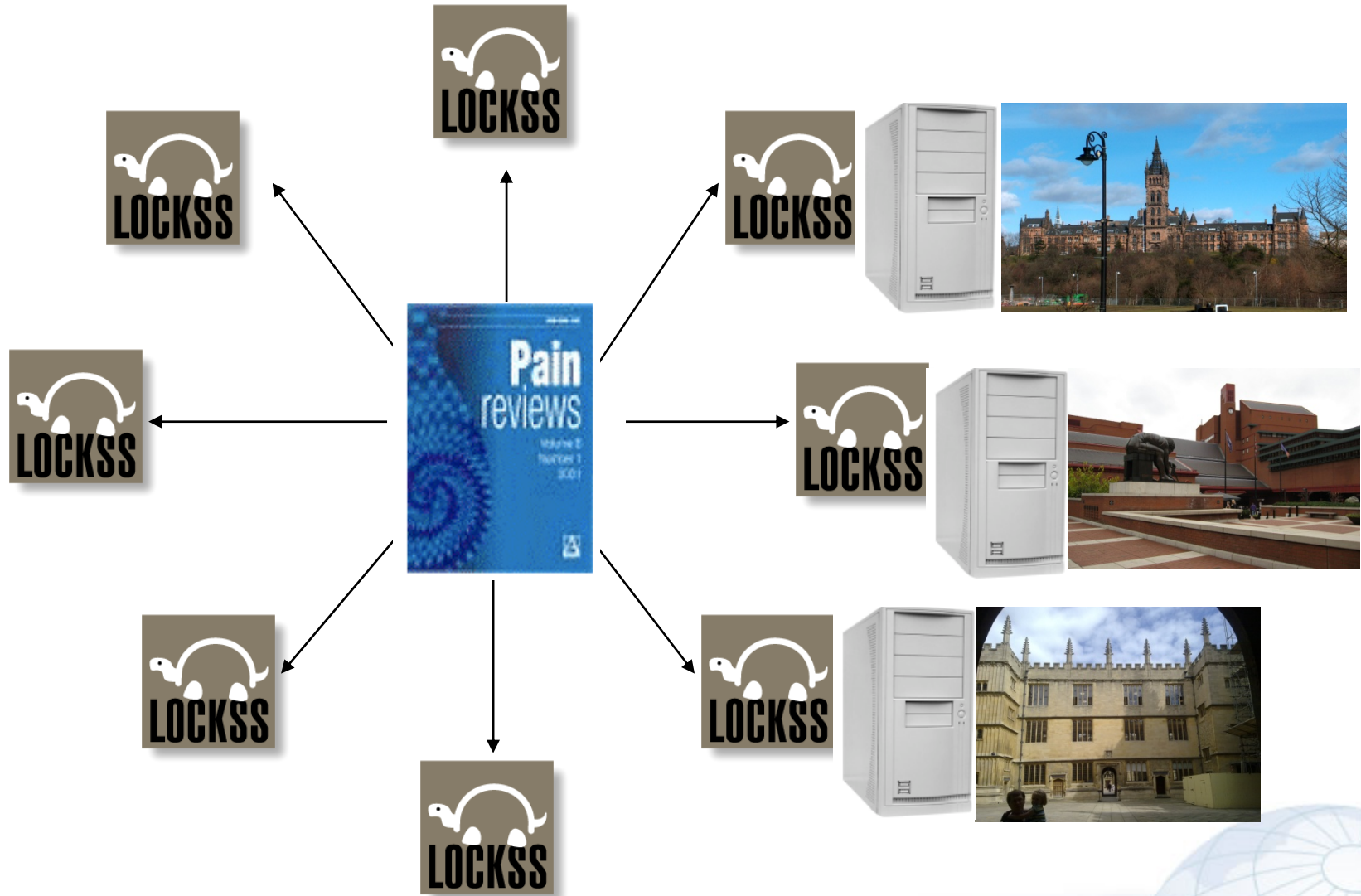
LOCKSS system has permission to collect, preserve, and serve this open access Archival Unit.



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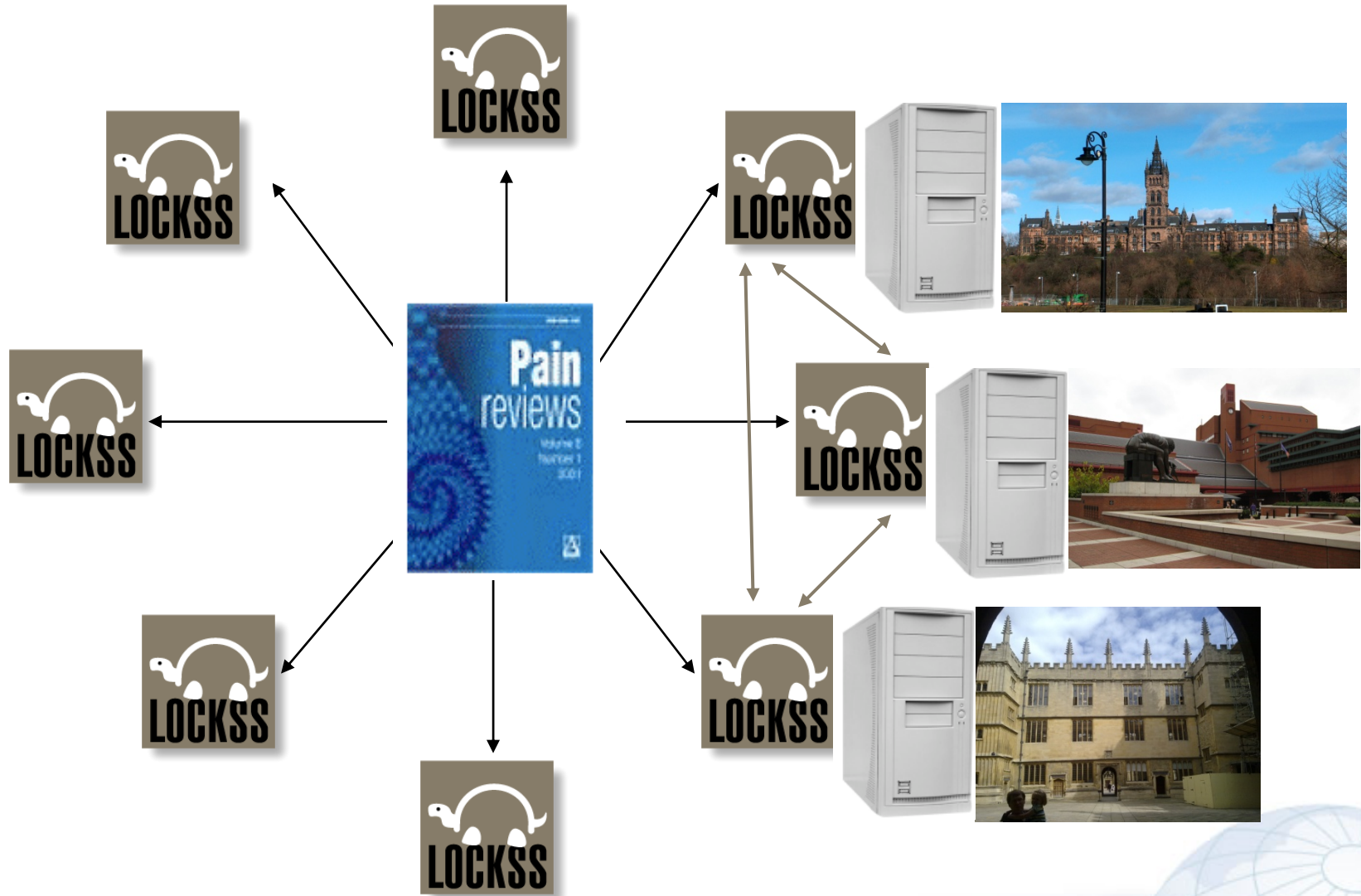
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# Independent Collection





# 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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