Addressing the E-Journal Preservation Conundrum: Understanding Portico

Long Island Library Resources Council

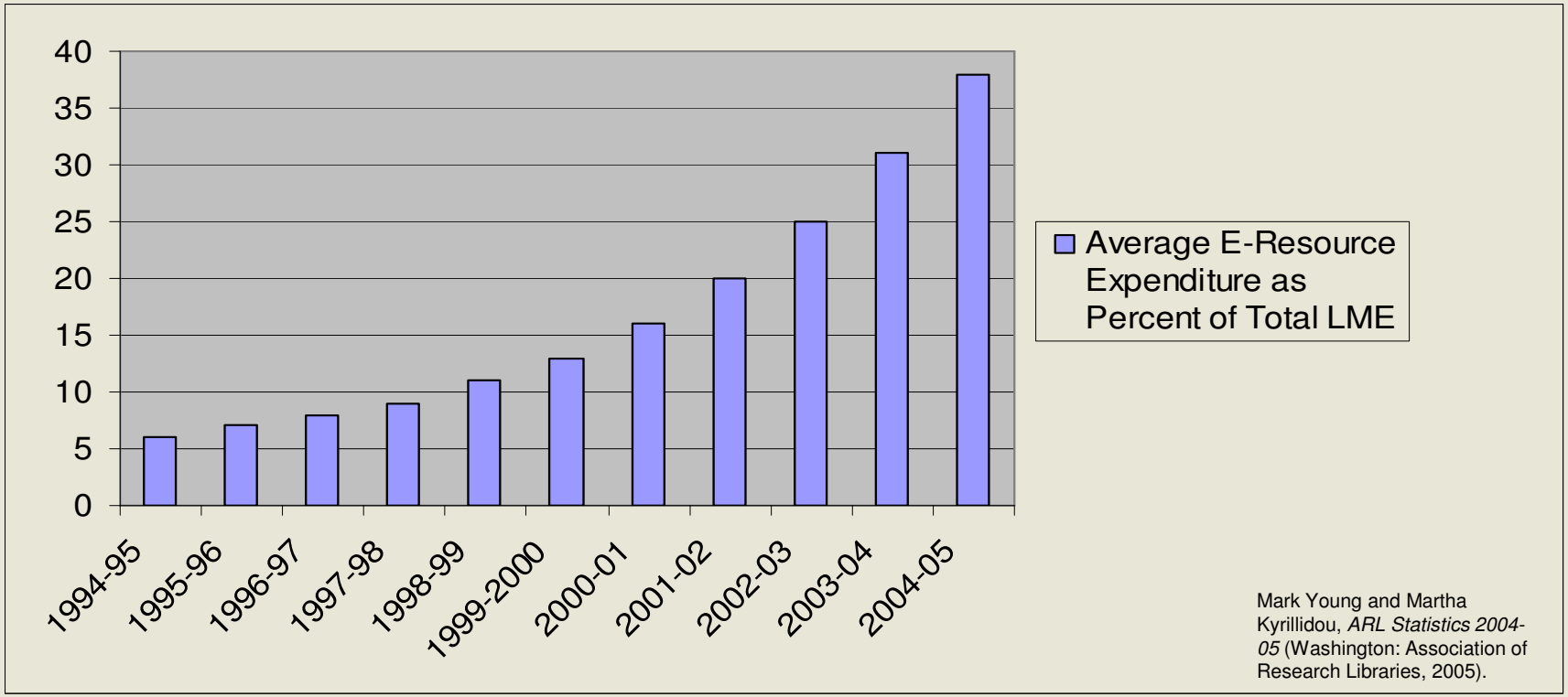
5th Symposium on Digitization

April 26, 2007

Ken DiFiore, MLS

Associate Director Library Relations

Changing Landscape: Growing Shift to E-Resources



Mark Young and Martha Kyrillidou, *ARL Statistics 2004-05* (Washington: Association of Research Libraries, 2005).

The greater convenience of electronic resources significantly enhances teaching and research.

Growing Shift to E-Resources: New Challenges

This shift poses a unique challenge for librarians in providing future access to scholarly e-journals:

- No longer maintain ownership as with print.
- Access controlled by publishers.
- Usability is technology dependent.
- It is unclear who is responsible for preservation.

Is it the library's responsibility?

Is it the publisher's responsibility?

Growing Shift to E-Resources: Library Response

Librarians are unclear about the source of a preservation solution and seek to adapt:

- Include "perpetual access" language in license agreement.
- Obtain "self-archiving" rights.
- Retain print copies.

```
-----Original Message-----
 [mailto:owner-liblicense-l@lists.yale.edu] On Behalf Of Mark Leader
Sent: Tuesday, March 27, 2007 5:08 PM
To: liblicense-l@lists.yale.edu
Subject: Is it time to stop printing journals?

The American Society for Cell Biology (ASCB) is considering
discontinuing the print version of its journal Molecular Biology of the
Cell (MBC). We welcome comments from the library community about the
value of print journals...

W. Mark Leader
Director of Publications
American Society for Cell Biology
mleader@ascb.org
```

http://www.library.yale.edu/~llicense/index.shtml

Growing Shift to E-Resources: JSTOR Response

Librarian concerns over e-journal vulnerabilities and additional cost of managing print led JSTOR to investigate of e-journal archiving.

- In 2002, JSTOR initiated a project known as the Electronic-Archiving Initiative.
- The goal was to facilitate the community's transition to reliance upon electronic scholarly journals by developing a technological infrastructure and sustainable business model to to preserve scholarly e-journals.
- E-journal archiving capacity need for the broader community.
- Portico was launched in 2005 by JSTOR and Ithaka, with support from The Andrew W. Mellon Foundation.

Portico – The Organization

- Mission - to preserve scholarly literature published in electronic form and to ensure that these materials remain available to future generations of scholars, researchers, and students.
- Structure - a not-for-profit organization that provides a centralized and geographically replicated archive.
- Philosophy - to utilize the best practice of managed preservation and a cooperative archiving model that balances the interests of libraries and publishers.

Portico's E-Journal Archiving Service

- Collect peer-reviewed journal content directly from publisher participants.
  - 33 Publisher participants entrusting nearly 6,000 titles. (http://www.portico.org/about/part_publishers.html)
  - Current e-journal content ("born digital") or digitized print ("reborn digital").
  - Range from commercial, university press, and professional society publishers. 
  - Sign 3-year archiving agreement.
  - Make annual financial contribution according to annual journals revenue (range from $250 to $75,000).
  - Content cannot be removed.

Portico's E-Journal Archiving Service

- Make electronic journal content available to library participants upon its loss to the community.
  - Over 340 Library participants.
    (http://www.portico.org/about/participating_libraries.html)
  - Sign 5-year archiving agreement.
  - Range in size from small liberal arts colleges to large university systems.
  - 25% from eight countries outside the U.S.
  - Libraries are asked to make an Annual Archive Support (AAS) payment to defray the cost of e-journal preservation that is based upon a library's total Library Materials Expenditures (LME).
  - Libraries that initiate support in 2007 are designated "Portico Archive Founders" and receive a savings toward their AAS.

Portico Archive Access Model

- Libraries that offer financial support to Portico Archive can get access archived content.
- Two scenarios when libraries can access archived content:
    1) Specific trigger event conditions prevail **and** titles are no longer available from the publisher or other sources.
    2) Participating publisher chooses Portico as one of their designated mechanisms for meeting post-cancellation or "perpetual access."
- Until a trigger event or post-cancellation access claim, select librarians at participating libraries are granted password-controlled access for archive audit and verification purposes.

Trigger Events

- When a publisher ceases operations and titles are no longer available from any other source
- When a publisher ceases to publish and offer a title and it is not offered by another publisher or entity
- When back issues are removed from a publisher's offering and are not available elsewhere.
- Upon catastrophic failure by publisher delivery platform for a sustained period of time.

For all libraries supporting Portico, trigger events initiate campus-wide access regardless of whether a library previously subscribed to the publisher's offering.

Portico's E-Journal Archiving Service

- Assuring the future access and usability of digital content by through managed preservation.
  - Preservation infrastructure is operational.
  - Over 520,000 articles ingested and preserved.
  - Archiving pipeline will steadily grow to ~500,000 articles per month.

"…preservation is applying activities needed to protect digital content from the effects of technology obsolescence , fading human recall, media deterioration."

Dr. Henry Gladney

H.M. Gladney, Digital Preservation in a National Context, *D-Lib Magazine* 13(1/2), Jan/Feb 2007

Portico Strategic Approach to Archiving & Preservation

1. Capture the intellectual content of the journal, including the text, images, tables, and limited functionality such as internal linking.

Intellectual Content of Journal

- Publisher's "look and feel" and value-added features are not captured for long-term preservation.

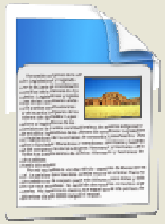
Portico Strategic Approach to Archiving & Preservation

1. Capture the intellectual content of the journal, including the text, images, tables, and limited functionality such as internal linking.
2. Compliment the publisher's journal production workflow process by archiving "source files".

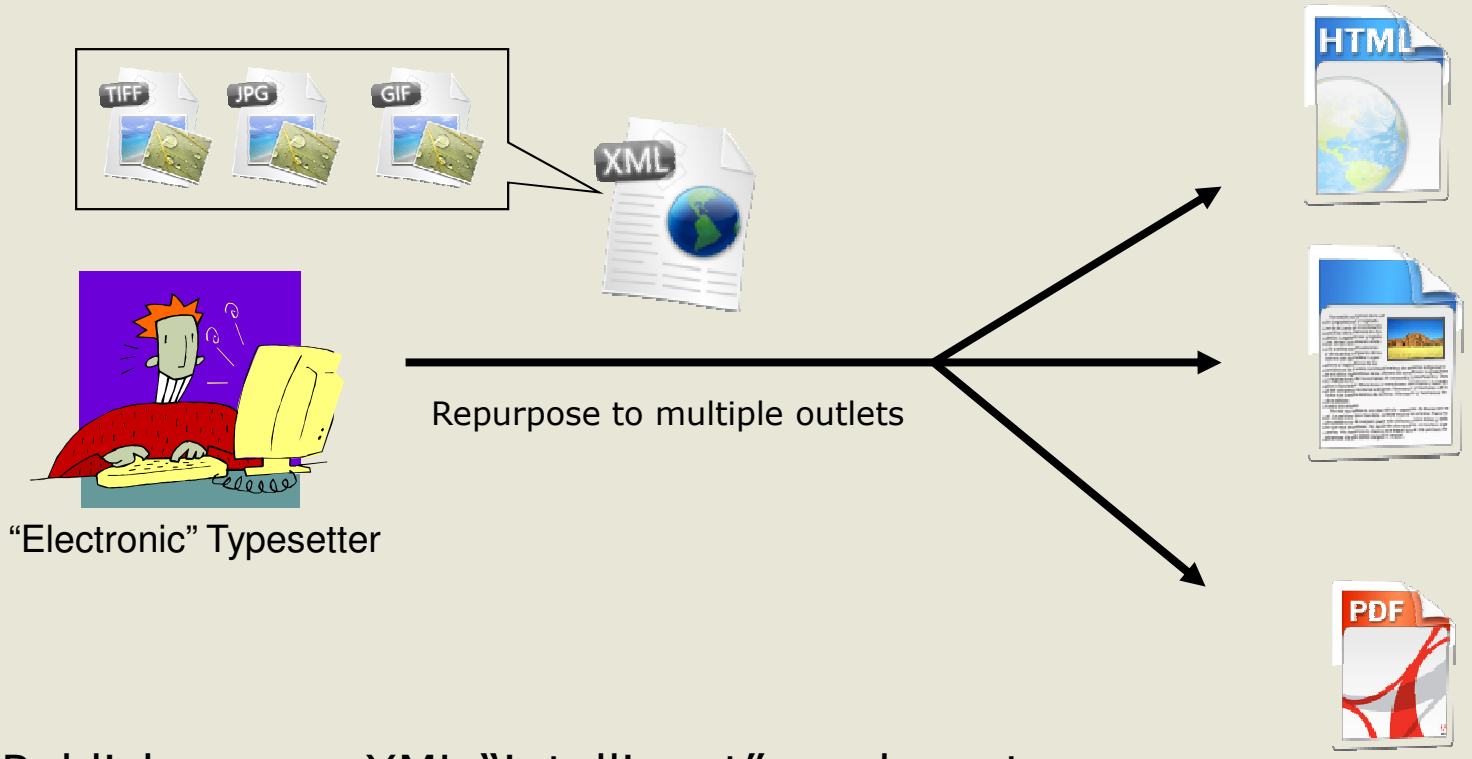
Typical Publisher Production Workflow Pre-1995

Print Typesetter

Print is single output



Typical Publisher's Production Workflow Post-1995



Publishers use XML "intelligent" mark-up to describe the content's structure and to more easily create new products for other distribution formats and technology platforms.

Portico Compliments Publisher's Production Workflow

Source Files

- Archiving the richest and most comprehensive e-journal content available.
- Reduces or eliminates the dependency on specific technology platforms for future use of e-journal content.

Portico Strategic Approach to Archiving & Preservation

1. Capture the intellectual content of the journal, including the text, images, tables, and limited functionality such as internal linking.
2. Compliment the publisher's journal production workflow process by archiving "source files".
3. Utilize managed preservation practices that focus on migrating files as technology changes and preservation formats are developed.

Portico Managed Preservation

Source files undergo numerous processing steps to identify, classify, and validate.

Convert or "normalize" XML files to NLM Archiving and Interchange document type definition (DTD), if necessary.

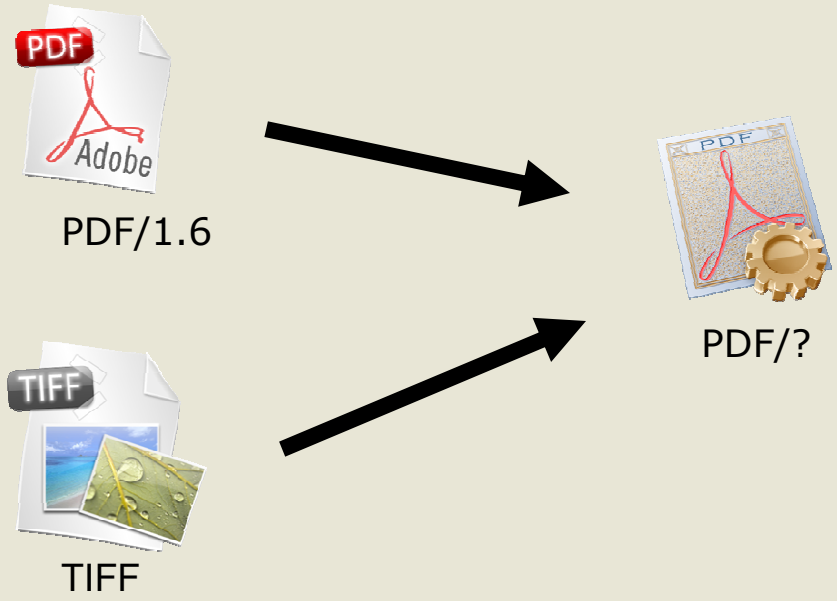
Apply metadata wrapper based on Metadata Encoding and Transmission (METS) standard and Preservation Metadata Information Strategy (PREMIS).

Perform quality control and create standard archival package.

Deposit package in archive management system.

Portico Managed Preservation

- Perform migration action to support preservation.
- Migrate from one archival format to another.
- Helps to assure archival robustness of file format.



Portico Strategic Approach to Archiving & Preservation

1. Capture the intellectual content of the journal, including the text, images, tables, and limited functionality such as internal linking.
2. Compliment the publisher's journal production workflow process by archiving "source files".
3. Utilize managed preservation practices that focus on migrating files as technology changes and preservation formats are developed.
4. Replicate archive to detect and recover from loss or damaged files.

Portico Replication

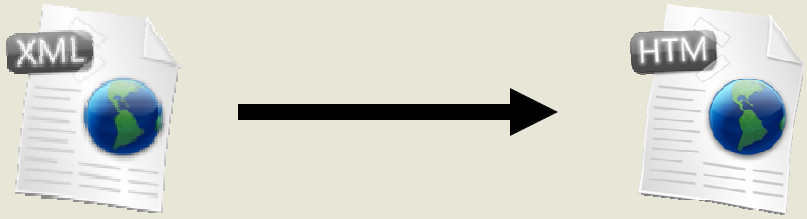
- Make multiple copies of archival objects and distribute to appropriate remote locations.
- Off-line replication: store copies of archived objects on media not connected to a live computer system and disperse the media to remote locations (2007-08).
- On-line replication: store copies of archived objects in a live computer system (2009-).

Portico Strategic Approach to Archiving & Preservation

1. Capture the intellectual content of the journal, including the text, images, tables, and limited functionality such as internal linking.
2. Compliment the publisher's journal production workflow process by archiving "source files".
3. Utilize managed preservation practices that focus on migrating files as technology changes and preservation formats are developed.
4. Replicate archive to detect and recover from loss or damaged files.
5. Render archive to support the delivery of files to current technology platform.

Portico Content Delivered via Rendition

- Content is rendered to support current delivery platform, i.e. web browser.
- Rendition engine can be modified to meet new technology requirements.



Journal of Gene Medicine

Currently published by John Wiley & Sons, Inc.

Volume 8, Issue 5, May 2006


Edit View Favorites Tools Help
Back Search Favorites
http://www.portico.org/Portico/article/archive.por?journalId=ISSN_1099498X&issueId=ISSN_1099498Xv8i5&articleId=pc01z1nrb
Go
Bookmarks 10 blocked AutoLink AutoFill Send to
EXIT PORTICO
PORTICO
out Portico
r Publishers
r Libraries
ws and Resources
ter the Archive
rowse by Journal Title
rowse by Publisher
earch
ntact Us
Journal Information | Table of Contents | Article Information
Article Information
Bibliographic Information
Current Journal Title: Journal of Gene Medicine
Compilation Copyright: 2006; John Wiley & Sons, Ltd.
Current Publisher(s): John Wiley & Sons, Inc.
Article Title: Pharmacologic transgene control systems for gene therapy
Author(s): Wilfried Weber, Martin Fussenegger
Citation: Volume 8, Issue 5, May 2006, pages 535-556
Publisher Copy: 10.1002/jgm.903
Archival Information
Archival Identifier: ark:/27927/pc01z1nrb
Content Type: E-Journal Content
Content Set: ISSN: 1099498X, E-ISSN: 15212254
Available Renditions: HTML (Full Text) | PDF (358 Kb)
Type to search

Journal Title: The Journal of Gene Medicine

Journal Subtitle: A cross-disciplinary journal for research on the science of gene transfer and its clinical applications

Print ISSN: 1099-498X Electronic ISSN: 1521-2254

Publisher: John Wiley & Sons, Ltd.; Chichester, UK

Citation: Volume 8, Issue 5, May 2006, pages 535-556

Electronic pub-date: 28 March 2006

Electronic pub-date: 25 April 2006

Electronic pub-date: 25 April 2006

Publisher Article ID: JGM903

Article DOI: 10.1002/jgm.903

Article SICI: 1099-498X(200605)8:5<535::AID-JGM903>3.0.TX;2-N

Article SICI: 1521-2254(200605)8:5<535::AID-JGM903>3.0.CO;2-2

Pharmacologic transgene control systems for gene therapy

Wilfried Weber *,

Martin Fussenegger *, †

Wilfried Weber [*],

Martin Fussenegger [*, †]

(email: fussenegger@chem.ethz.ch)

[*]Institute for Chemical and Bio-Engineering, Swiss Federal Institute of Technology Zurich-ETH Zurich, ETH Hoenggerberg HCI F 115, Wolfgang-Pauli-Strasse 10, CH-8093 Zurich, Switzerland

Author Notes:

Correspondence to: [†]Institute for Chemical and Bio-Engineering, Swiss Federal Institute of Technology Zurich, ETH Hoenggerberg HCI F 115, Wolfgang-Pauli-Strasse 10, CH-8093 Zurich, Switzerland.

History

Received: 29-11-2005 ; Reviewed: 26-12-2005 ; Accepted: 30-01-2006

Abstract

Pharmacologic transgene-expression dosing is considered essential for future gene therapy scenarios. Genetic interventions require precise transcription or translation fine-tuning of therapeutic transgenes to enable their titration into the therapeutic window, to adapt them to daily changing dosing regimes of the patient, to integrate them seamlessly into the patient's transcriptome orchestra, and to terminate their expression after successful therapy. In recent years, decisive progress has been achieved in designing high-precision trigger-inducible mammalian transgene control modalities responsive to clinically licensed and inert heterologous molecules or to endogenous

Keywords

Geneswitch; inducible expression; vival vector; gene regulation

Contract/Grant Number: 631-065946; Swiss National Science Foundation

Contract/Grant Number: EC Framework 6; Swiss State Secretariat for Education and Research

Contract/Grant Sponsor: Swiss National Science Foundation

Contract/Grant Sponsor: Swiss State Secretariat for Education and Research

Contract/Grant Sponsor: Cistronics Cell Technology GmbH

Introduction

Gene therapeutic interventions in the well-orchestrated and multi-regulated gene networks operating in the human body require (semi-)synthetic trigger-inducible gene switches for optimal fine-tuning of therapeutic transgene expression levels and kinetics to meet the specific needs of the patient [1-3]. Recent advances in heterologous transgene control design have resulted in a portfolio of gene regulation systems responsive to clinically licensed small-molecule drugs such as antibiotics [4-7], steroid hormone analogs [8], [9], rapamycin

control systems will become the prime dosing technology in the gene therapy era.

[Untitled section]

Acknowledgements

The original work on transgene regulation systems was supported by the Swiss National Science Foundation (grant no. 631-065946), the Swiss State Secretariat for Education and Research within EC Framework 6, and Cistronics Cell Technology GmbH, Einsteinstrasse 1-5, CH-8093 Zurich, Switzerland.

References

1 Fussenegger M. The impact of mammalian gene regulation concepts on functional genomic research, metabolic engineering, and advanced gene therapies. Biotechnol Prog 2001; 17: 1-51.

2 Weber W, Fussenegger M. Approaches for trigger-inducible viral transgene regulation in gene-based tissue engineering. Curr Opin Biotechnol 2004; 15: 383-391.

3 Weber W, Fussenegger M. Novel gene switches. In Handbook of Experimental Pharmacology - Conditional Mutagenesis, Feil R, Metzger D (eds). Springer: Berlin, Germany, 2006; in press.

Benefits to Libraries & Publishers

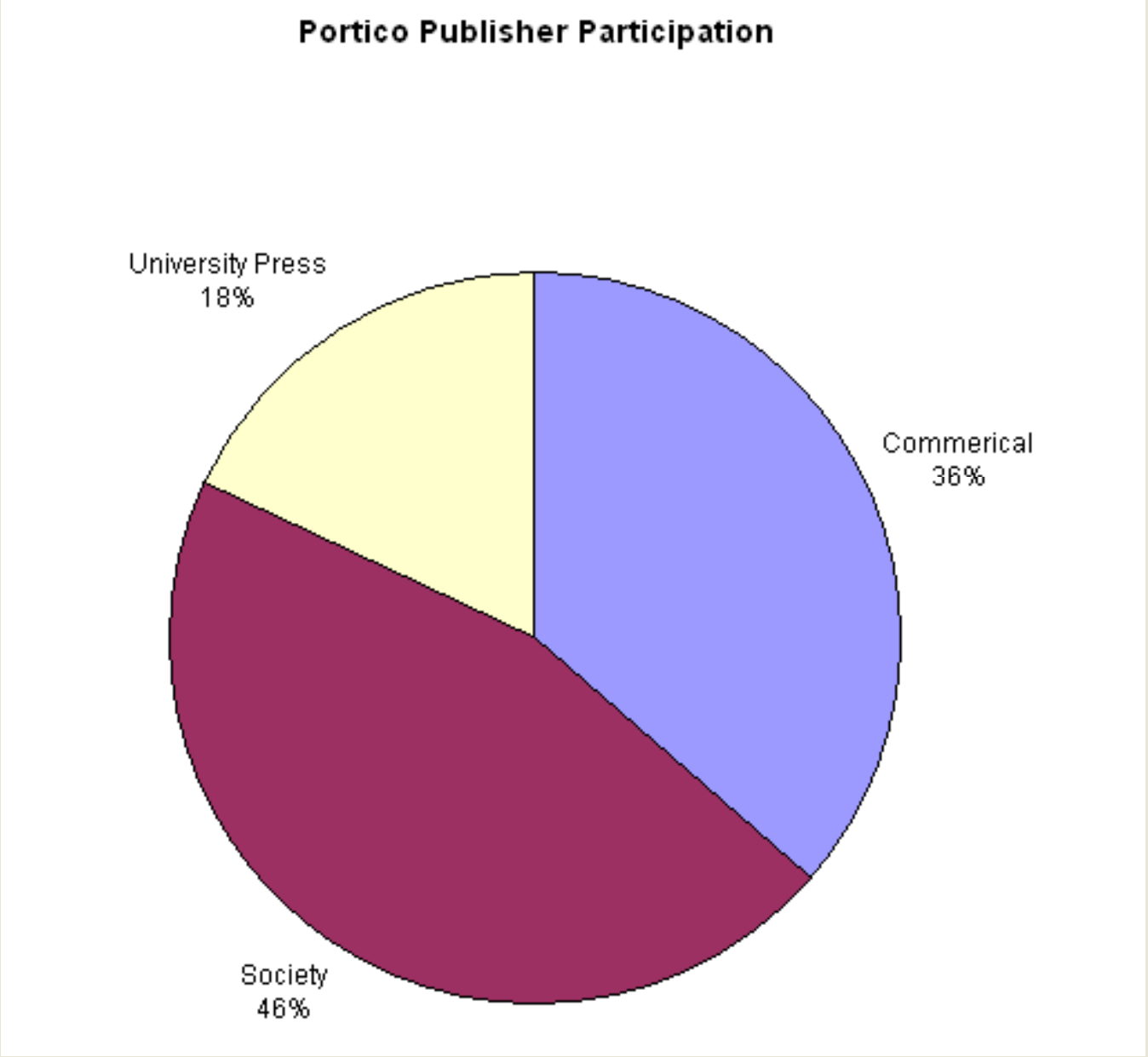
- Facilitates the transition to reliance upon electronic resources by meeting need for trusted, third-party archive.
- Provides a practical mechanism to address "perpetual access" needs, without negative impact on publishers.
- Shared infrastructure or "virtual stacks" reduces preservation costs system wide.
- May enable savings through reduced processing, publishing, and storage of print resources.
- Provides a means of assuring access to e-resources over the long term and protects against gaps in library collections.

Consortia Savings

- To recognize cost savings achieved by working with groups of libraries, Portico offers 5% savings to libraries that are members of consortia that facilitate discussions with Portico.
  - 'Letter of Understanding' between Portico and Consortium governing body formalizes relationship.
  - Consortia savings can be combined with Archive Founders participation savings, e.g. 5% + 10% = 15%

Carolina Consortia	METRO	NELINET	NERL
ASERL	AULC	BLC	CIC
CARL	GWLA	Oberlin Group	SOLINET
Orbis-Cascade	MLNC	NYSHEI	TRLN
PALINET			

PORTICO


Portico Publisher Participation
University Press
18%
Commerical
36%
Society
46%

Ask me questions!

Ken DiFiore
ken.difiore@portico.org
www.portico.org