Creating the Future of Publishing at RIT: Products (and lessons) from a Cross-Disciplinary Undergraduate Research Center

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Creating the future of publishing at RIT

Products (and lessons) from a cross-disciplinary, undergraduate research center

Open Publishing Lab
our goals for today

- OPL Overview
- How we got started
- Demonstrate our open-source publishing applications
- Lessons we’ve learned
Presenters

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overview of the opl
The Open Publishing Lab (OPL)

- The OPL is a cross-disciplinary center researching new methods of content creation and developing innovative, open source applications for publishing across various media.

- The 3E’s… solutions we create
  - **Extend** existing publishing platforms
  - **Enable** new publishing products and business models
  - **Empower** individuals and communities to easily tell their stories as never before
24 Cross Disciplinary Researchers
- Faculty, Alumni, and Students
  - CIAS – Print & New Media
  - GCIS – Software Engineering & IT
- Partnered with RIT Libraries, the Lab for Social Computing, the Communications Department, Photojournalism Program, the CollaboRITorium, & the Public Knowledge Project

Currently funded by an HP Lab’s Innovation Grant, the RIT Sloan Printing Industry Center, & the School of Print Media
how we got started

rethinking publishing & print media
The fundamentals of publishing essentially stayed the same for half a millennia (~545 years)
1995: revolution not evolution

- Prior to ~1995 printing technology evolved
  - Making More Bibles *Faster, Cheaper, and Efficiently*
- ~1995 multiple forces started a revolution
  - Improving print technology removes the craft
  - Increasing competition & consolidation
    - Nationally and internationally
  - Mainstream Digital Presses enable variable print
  - Widespread use of Databases across business
  - The Web competes as a publishing & communications medium
the new world of publishing

- Smaller Print Runs
  - Declining newspaper circulations
- Loss of certain markets to the web & electronic publishing
- Lower profit margins as supplier charges increase and competition drives prices down
- Shifts within *how* and *who* is creating content

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ritopl@rias.rit.edu ~ http://opl.cias.rit.edu
People are creating more content than ever

- Given access to the tools, anyone can become a media creator
- Web 2.0: Wikis, Blogs, Social Networking

December 25, 2006
Time Magazine
2006 Person of the Year
“YOU”
The Long Tail (Chris Anderson)

The economically viable audience sizes are getting smaller, while the “life” of content is getting longer.
publishing 2.0

发布了内容的多样化
- 人们正在创建比以往更多的内容
- 给予访问工具，任何人都可以成为媒体创作者
- Web 2.0：Wiki, Blogs, Social Networking

新的经济和寿命（长尾）

未来
- 所有内容，新旧，都必须是消费者想要的任何媒介都可用

December 25, 2006
Time Magazine
2006 Person of the Year
“YOU”
the open publishing lab

- 2006/7 – Conversations about the future in SPM
- Spring 2007
  - Proposed the lab & lecture series
- Summer 2007
  - Funded a part-time student develop to create a Wiki-Print Prototype
- Fall 2007
  - Presented results at HP University Research Conference
  - ImagineRIT Proposals
- Winter 2007/8
  - Found out all ImagineRIT projects were ALL accepted!!!
imagine a kick start
our current projects
the innovation news (iNews)
**Project Overview**

- Create a virtually instantaneous, cross media newspaper platform to document events at RIT.
  - Reporters and photographers must be able to submit content from the field
  - Web content must be able to quickly flow to print PDF Layouts

**The Technologies**

- Digital Printing
- Drupal content management system
- Wireless Digital Cameras
- 2 Dimensional Barcodes
- Xinet Prepress System
- XML and GoogleEarth
- Adobe PDF and Creative Suite
Stories and photographs are wirelessly uploaded via the I-News website

- Wireless Laptops and other input devices (iPhone) were used to report stories
- Images are submitted via laptops and wireless camera transmitters
- Metadata is automatically added to all assets via the iNews platform

Reporters wirelessly file stories from the field
Content is reviewed in a central “control room”

- Content was automatically formatted by the software
- ImagineRIT 2008 Editing Staff
  - 3 Text Editors
  - Rotating student photo editors managed by Photojournalism Professors
    - William Snyder, visiting professor and Pulitzer Prize winner
    - Gunter Cartwright
  - 5 Technical Staffers
    - Students who developed the platform
website

⭐ The website is automatically updates as content is published by the editorial team.
⭐ Content and metadata is automatically tagged as it was filed.
⭐ Website is accessible via mobile phone, iPod Touch, and traditional web browsers
⭐ Using GPS metadata, the news is also mapped onto Google Earth.

http://inews.cias.rit.edu

Google Earth
Content was exported as XML and flowed, via Javascript, into InDesign templates.

- Dimensions: single sheet, 12x18 sheet, duplexed
- PDF can be printed anywhere
  - For ImagineRIT 2009 we used Canon C1, Xerox 6060, Xerox 7000, Kodak Nextpress 2100, & HP Indigo 5000
- Each run length dynamically based on the number of festival attendees at that time
- PDFs immediately available on web

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project history and future

- Spring 2008
  - Developed iNews
  - 4 editions created to report ImagineRIT 2008
- Summer 2008
  - Released iNews as a Drupal Install Module
- Fall 2008
  - Covered Brick City Weekend with 6 editions
- Winter 2008/9
  - Video Integration
  - Covering an RIT Hockey Game
- Spring 2009 and Beyond
  - Covering ImagineRIT 2009
  - Pursuing external funding
  - Partnering with outside groups
page2pub overview

- A platform that collects content from a variety of online resources and transforms it into a well formatted publication.
  - Get content... text, images, graphs, tables...etc
  - Preserve content structure and relationships
  - Transforms content into a unified and well designed print-ready document

- Technologies
  - Open ePub format
  - XUL
  - XML
  - Adobe Flex & Flash
  - Java and Javascript

- Being developed in conjunction with a software engineering Senior Project team
page2pub deliverables

Create a browser extension that can:
- Captures user selected content from webpages (including entire webpages)
- Standardize content into an Open eBook (ePub) file
- Add table of contents and other metadata

Create an application that:
- Formats the ePub file using design templates
- Allows the user to edit the document (page order, formatting, and included contents)
- Delivers a PDF that can be sent to a print service provider
page2pub modular workflow

Gather
- Wiki's
- Blog
- Online Journals
- Other

Transform
- Gathered content
- Transformation Phase
- Output to: Ebook, Standardized XML Format

Publish
- Choosing Design Template
- Document Rendering Engine
- .epub file

- Ebook
- XHTML website
- PDF
- Send to print on demand Vendor
- Download PDF
- Printable PDF

Wiki's
Blog
Online Journals
Other
project history and future

Summer 2008
- Research and architecture planning
- Secured funding from HP Labs
- Presented project at RIT Undergraduate Research Conference

Fall 2008
- Began Development
- Applied for SE Senior Project Assistance

Winter 2008/9
- Continued Development
- Began SE Senior Project Collaboration

Spring 2009 and Beyond
- Launch at ImagineRIT 2009
  - Creating custom Rochester Guidebooks using RocWiki content
- Stabilize and Release v1 of Page2Pub Platform
the open publishing guide (opg)

http://opg.cias.rit.edu
project overview

- Website to guide users through publication process
  - Choosing the appropriate tools
  - Finding freely available, open source assets
  - Supplying ready to use templates
  - Navigating copyright and creative commons rules
  - Getting books distributed through online retailers like Amazon.com

- Audience: people with little/no technical experience

- Technologies
  - The Drupal Content Management System
  - Digital Video (Vimeo)
  - Adobe Flex & Flash
  - Javascript (Jquery)
the opg’s origins

A letter from a local teacher:

“We are hungry to create actual books with our students...

[Our] students are totally engaged and excited about making books...

We want to find a way to tap into local publishing resources... but I don’t know where to start.”
the guide’s objectives

- Understand barriers to user generated productions
- Provide repository of current standards and processes in self publishing
- Develop set of processes and options to enable non technical users to self publish
- Develop asset base of freely available content for reuse in publication
Multiple modes of navigation

รวด Publishing Phases
 brisk Planning > Creating > Designing > Publishing > Sharing

.readline
_topic Specific
 brisk Tools – Publishing Resources to assist publishing and enhance your publication
 brisk Software, Publisher Options, Distribution, Copyright
 brisk Assets – Guide to Open Source Assets
 brisk Photos, Text, Templates, Reference Guides
 brisk How to – guided steps for publishing phases

รวด Project Specific
http://opgl.cias.rit.edu
the self publishing advisor
free templates and video tutorials
benefits

- Increase the number of authors publishing
- Map the “ecosystem” of digital publishing
- Development of research community
  - Track areas of interest
  - Survey and outreach
  - Future consumer panels
project history and future

Spring 2008
- Planned initial site structure

Summer 2008
- Designed and architected site
- Developed content for site

Fall 2008
- Developed *Self Publishing Advisor* Application
- Continued Implementation

November 2008
- Soft-Launch
- Secured 2nd Round Funding

Winter 2008/9
- User Testing
- Further Content Development

Spring 2009 & Beyond
- Officially launch site at ImagineRIT 2009
- Continue to improve design and content based on testing
project overview

Create a game platform that
- Is easy to learn and fun to play
- Gets event attendees to meet and interact with each other
- Automatically tie those connections back to online spaces

The technologies
- Variable data printing
- 2 Dimensional Barcodes (QR Codes)
- PHP, Java
- Social computing platforms
Visitors register for the game and receive a name tag, game card, and 2d barcode stickers.

- Name tags had icons that corresponded to their interest
- QR Code contains a unique identifier for that player.
Find players who shares one of their icons
Trade stickers and add to game cards.
actual game play
**scoring**

- Collect and scan game cards
- Platform processes results
  - Scores game
  - Connects users
  - Generates web pages
  - Creates visualizations
  - e-mails players with a link to secure personal results page
- Players can visit each other’s LinkedIn and Facebook pages, and are given the option to get into e-mail contact.
At ImagineRIT 2008

- 138 people played the game
  - 57 Students
  - 32 Visitors
  - 17 Alumni
  - 13 VIP Players
  - 13 Faculty
  - 6 Staff
- 1320 stickers traded

A “Connection Wheel” showing the web of player’s interconnections
At ImagineRIT 2008

Player’s self selected interests

- Innovative Science and Technology - 17%
- Creative Play - 17%
- Being Green - 16%
- Communications Revolution - 15%
- Artistic Visions - 14%
- Healthy Living - 8%
- New Ventures - 6%
- A Global View - 3%
- On Stage - 1%

Interest Breakdown
project history and future

Spring 2008
- Version 1
- Played at ImagineRIT Festival

Summer 2008
- Played at Honors Orientation

Fall 2008
- Version 1.5
- Played at Sloan Print Industry Center Conference

Winter 2009
- Version 1.6 (beta)
- Played at SPM Wayzgoose
- Publicly Release v1.6 at http://opl.cias.rit.edu

Spring 2009 and beyond
- Innovation Festival
- ?? – Rochester Jazz Festival
- ?? – RIT Orientation
lessons we’ve learned
Always tap (and extend) your networks
lessons

✶ Always tap (and extend) your networks
✶ Challenge yourself (and your students) to think audaciously
✶ Trust your students and give them a stake in the game
✶ Deadlines are crucial (but be sure to be fair and realistic!)
✶ Document everything
✶ You’re the only one who can tell your story
✶ People actually want to hear “I’m from RIT and I’m here to help.”
✶ Its amazing what you can accomplish when you are not worrying who gets the credit
✶ Encourage Open Innovation
open innovation

- All OPL projects released open source via our website
- Why?
  - Exposes our researcher’s work to the largest possible community
  - Provides opportunities for spin-off service based businesses
  - Service to community and industry
get involved

>We’re always looking for partners (and students) interested in
- Testing or using our applications
- Collaborating on our platforms
  - Programming
  - Design
  - Marketing and Communications

- visit our website: [http://opl.rit.edu](http://opl.rit.edu)
- friend us on twitter: ritopl
- join our facebook group
- e-mail us: ritopl@rit.edu
- visit the lab: Building 7b, Room 1275