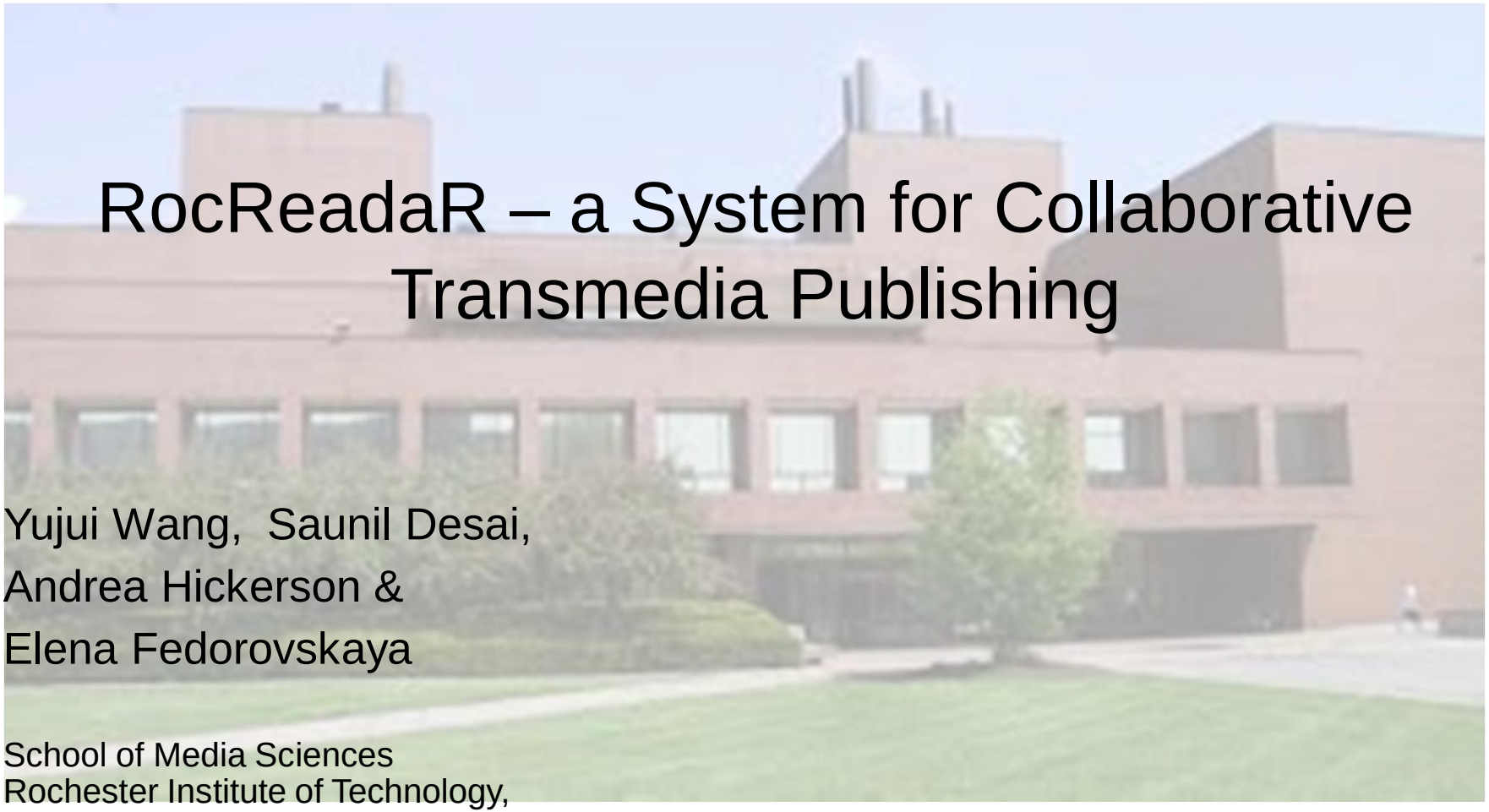

RocReadaR – a System for Collaborative Transmedia Publishing

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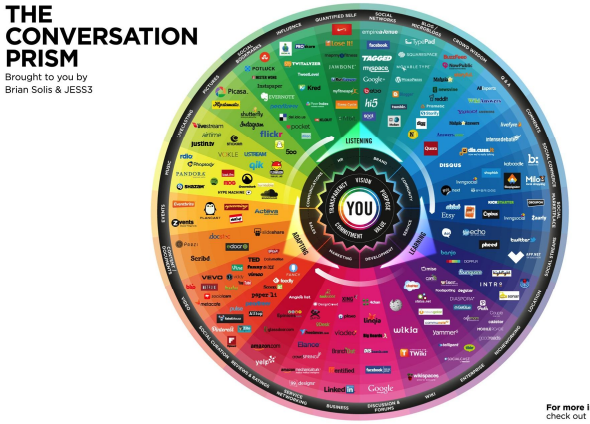
Outline

- Context
- Study goals
- Experiment
- Results
- Future direction

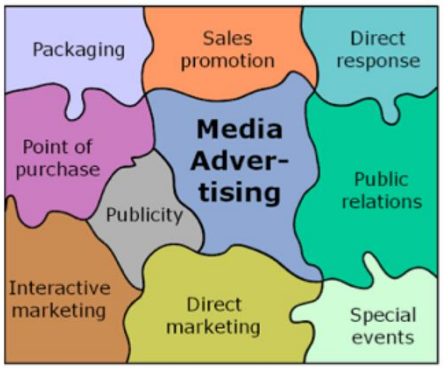
Two opposing trends – Media Fragmentation

- Media fragmentation



Social media landscape fragmentation

- Media integration



Integrated marketing

Media Integration Phenomena

Term	Message/Story (one – many)	Media Form (text, photos…)	Channel (Newspaper Web, Social …)	Example
Multimedia	One story	Many forms (Mix of Media forms)	One Channel	 NY Times
Crossmedia	One story	One or Many forms	Many Channels	 Gannett Advertising
Transmedia	One story universe – Many stories	Many forms	Many Channels	 The Lizzie Bennet Diaries Pemberleydigital

What is the future for printed publications?

Interactive print concept

- Interactive print - printed product is an independent interactive media, which offers concrete multisensory experiences and fluently links to other media (Vehmas, et al., 2011, VTT).
- Hybrid media –cases of interactive print products, which use an external device, e.g. mobile phone, to accomplish interactivity.
  - Example – Augmented Reality

From VTT report “Future of European Printing Industry” 2011

Will AR make a difference?

- Claims for a very large market size

- Many companies and services are appearing
- Large corporations are becoming interested
  - Metaio, ARToolkit were purchased recently
- Anticipation for mass market wearable smart devices: Google Glass, Vuzix, ODG R-7, Samsung, Hololens

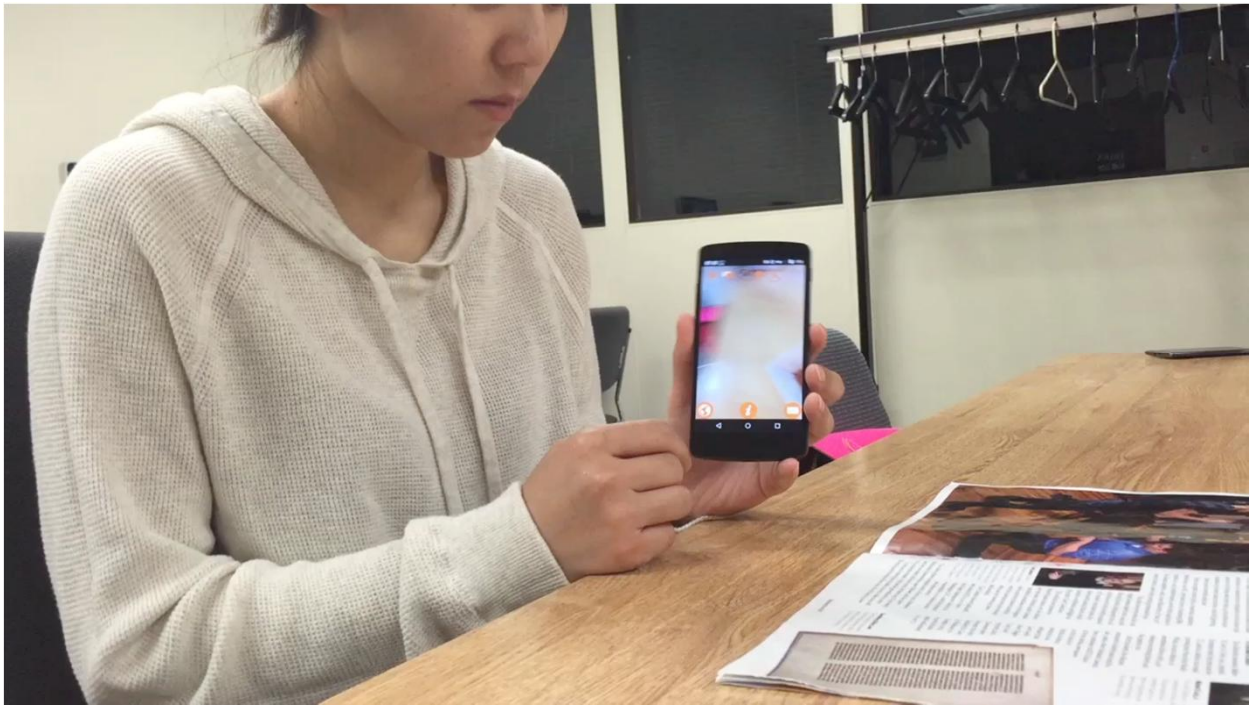
Current Research

Goal: Develop and test the feasibility and usefulness of a collaborative transmedia communication system prototype, "*RocReadaR*", for news and information media that anchors in printed publication.

Research questions:

- How do users evaluate their experience with the prototype when reading a printed news magazine?
- Does this method of publishing provide a desirable utility and an enhanced quality of reading experience?
- How does it compare with the traditional reading of the magazine?

RocReadaR for Android smartphone



A mobile smart device application that links three different media channels:

printed publication,

digital web-based information,

social media with its collaborative capability of sharing and adding content.

Android phone and Google Glass applications.

Procedure

- 24 student participants from different RIT colleges: 12 female and 12 male participants . Average age – 23 years old.
- Each participant read two articles from a recent issue of the “Research at RIT” quarterly magazine in two conditions:
  - presented in a traditional way (print only publishing)
  - using RocReadaR (collaborative transmedia publishing)
- Questionnaire with Likert-type 7-point scales to rate both instrumental qualities: utility, efficiency, functionality, effectiveness, usefulness and ease of use; and non-instrumental qualities, such as aesthetic qualities, and motivational qualities (Mahlke et al., 2007).
- Semi-structured interviews at the end.

Stimuli

Unlocking Your Imagination

by Debbie Waltzer

It is a celebration like no other. Imagine RIT: Innovation and Creativity Festival, a one-day event now in its seventh year, celebrates the marriage of right- and left-brain activities across RIT—and engages a crowd of 35,000 attendees to boot.

Connecting with the Community

Held on campus on the first Saturday in May—rain, snow, or shine—Imagine RIT is a showcase of more than 400 student, faculty, and staff exhibits, live performances, and research projects. But this is not just a show and tell. Participants, including Rochester and upstate New York residents as well as prospective students and their families, get hands-on experience with RIT's breadth of technical and artistic offerings. RIT President Bill Destler brought the idea for the festival to campus when he arrived in 2007, having supported a similar event at University of Maryland.

Organizers say Imagine RIT has changed people's perception of the university.

"Imagine RIT is an interactive way for visitors to immerse themselves into all that the university has to offer," said Barry Culhane, executive assistant to the president, who serves as festival chairman. "We are proud year after year to showcase the breadth of innovation and creativity among our faculty, staff, and students. The festival is truly a platform upon which we can illustrate why RIT is consistently ranked by *U.S. News & World Report* among the nation's leading comprehensive universities and the second largest producer of undergraduate degrees in science, technology, engineering, and mathematics among all U.S. private universities."

And throughout the festival's history, exhibitors have made significant connections with corporate and research contacts.

Award-Winning Technology: Three RIT students from the B. Thomas Golisano College of Computing and Information Sciences created Open Video Chat, an open-source program for low-cost XO laptops that enables users to communicate via American Sign Language. Justin Lewis, Fran Rogers, and Taylor Rose (pictured above)—won a technology award from Digital Rochester after a festival visitor nominated them.

Video Chat Program Earns Award

As undergraduate students in the B. Thomas Golisano College of Computing and Information Sciences in 2013, Justin Lewis, Fran Rogers and Taylor Rose wanted to help deaf and hard-of-hearing children from developing countries have an easier time of communicating with their peers around the world.

So the trio created Open Video Chat, an open-source program for low-cost XO laptops that enables users to communicate via American Sign Language. Hundreds of people stopped by their exhibit during the festival to use the software and to play educational computer games created by the students.

Impressed by their innovation, an attendee nominated Lewis, Rogers, and Rose for special recognition by Digital Rochester, a local professional organization. A few months later, they learned they had won a coveted Student Achievement Award from the organization during its 2013 GREAT (Greater Rochester Excellence and Achievements in Technology) Awards ceremony.

"We were thrilled," said Lewis, who earned his bachelor's degree in computer science and now is a programmer for Dealer.com in Burlington, Vt. "Imagine RIT gave us an opportunity to help others and be a part of a very special day."

Power of Emotion: Dr. Caroline Easton illustrates with a boy the facial muscles involved in the expression of the emotion disgust. The boy is trying to practice showing this emotion by interacting with a computer program (Nviduo FaceReader) that maps the muscles of his face and gives feedback about the accuracy of emotion displayed.

Virtual Reality Tool Aids Clients in Therapy

Substance addiction and intimate partner violence are challenging behaviors to change. RIT forensic clinical psychologist Dr. Caroline Easton, along with professors Richard Doolittle, Jim Perkins, and Glen Hintz and medical illustration graduate students Alan Gesek and Ray Szigeti, turned to technology as a way of encouraging perpetrators of these behaviors to modify their actions.

Thus was born "Al-Virt," an animated coach who explains the deleterious effects of drugs and alcohol on the brain, via an interactive video. The team also created a smartphone app that helps people manage their anger in constructive ways versus committing aggressive acts.

12 Spring/Summer 2014 Report

Research at RIT 13

An open page of the redesigned Research at RIT magazine with the available digital content.

A recent redesigned issue (Spring/ Summer 2014) of the Research at RIT magazine.

Relevant digital content was assembled for each page of the articles.

Results

- The questionnaire responses were aggregated in groups pertaining to the following evaluation categories:
  1) Reading performance;
  2) Usability;
  3) Satisfaction with the current prototype and an improved system;
  4) Aesthetics of the interface and design elements;
  5) Utility of the system;
  6) Motivational quality of the system for reading news media.

Results

- No significant difference between the articles in two conditions for **reading performance** in terms of comprehension, the effort of focusing attention, the interest level of the material.
- The participants could describe the content of the articles in both cases. However, in a number of instances in the RocReadaR condition, when asked to recall a specific detail the participants recalled the content they learned from digital media.
- During interviews they mentioned the availability of digital content as a factor to learn and remember more material.

Results

Satisfaction

- Overall the users were satisfied with the **current prototype** (4.8, ratings higher than neutral 4, $p<0.005$) and were even more satisfied with the **ideal system** (when existing performance shortcomings are eliminated) (5.1, $p<0.001$).
- For a few participants, if their response was below neutral, it was often in relationship to this particular magazine, a selection of particular digital media, or an Android platform.

> “If it's an app for an Apple device, and if I read more RIT magazines, yes. I would use it. I think it's very cool, but personally I read novels over magazines, while this app is for magazines”.

> “The digital material linked to the article should be more related to the reading. What is being described in the article should be searchable through the app.”

Results

Usability

- The usability ratings for accessing digital media were rather neutral.
- The main concerns were associated with the speed of the application, performance stability, configuration and the display quality of additional media items.
- The users wanted to have more feedback to know what the system is doing.
  - e.g., if the page scanning is completed or the video clip is going to last more than a minute.
- The usability ratings regarding the ease of learning, understanding how to operate and clarity of the interface were very high – 5.8 ($p<0.001$)

Results

Usability – cont'd

- If the access to the media items was not instantaneous, users commented about losing track of reading.
- They also pointed out that a more intimate link with the media would be desirable. For example, if there were a video complementing a specific sentence or a paragraph in the text, then underscoring a relevant word, or marking a sentence with a symbol would aid in explaining or illustrating the text.

Results

Utility

- High perceived utility of the prototype (5.4, $p<0.001$). The majority of users rated highly the perceived usefulness of the application for learning more information to supplement and expand the printed content, for making information more interesting and easy to remember, for the ability to share.

- “Fun ! Adds a whole other dimension to reading. Helps reader to remember and connect text to digital world in an innovative and helpful way, would love to see with text books.”

- Few Skeptics - “I think the news article is self-contained, and enough for a general reader. The digital media part is kind of unnecessary.” “ The app distracts from focusing on the article”.

Results

Motivational quality

- Users acknowledged that providing easy to recognize, familiar icons related to the media items motivated them to use the system and explore content further (5.0, $p<0.01$).
- The sharing feature was deemed very desirable and helpful to share interesting reads, and to engage friends by sending links, photos, notes or even captured pages.

Conclusion

- Transmedia reading which integrates print and digital media interactively using smart device is a useful and engaging way of reading.
- Majority of participants felt that they would use the system and recommend it to their friends if it is improved.
- They acknowledged that it can change their existing perception of printed publications as being obsolete and limited.

Future research

- Improve the system based on the users' responses
- Run a large campus-wide trial to obtain real-life usage data
- Test whether transmedia publishing can promote news reading and enhance interest in the content and "deeper" reading
- Test wearable system

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