Rich Internet Applications

Foundations of Software Engineering

CSCI 5828 – Spring 2010

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Agenda

Definition
Companies
Technology
Issues
Trends

What are Rich Internet Applications

- RIA

  noun

1. Internet applications that have desktop characteristics
2. Internet applications that have a significant user experience beyond typical web sites
3. Web 3.0…that is, it's a version past what was considered Web 2.0

Characteristics

- Cheap hardware (Thin Client)
- OS transparency
- Doesn't have to be a browser
- Free/Ad based
- Socially aware
- Location aware
- Mobile experience
- Offline experience (Html5, Adobe Air/Flex)
- Iteration
- My application on every machine on the planet

Examples

Netflix

Garmin Connect

OnLive

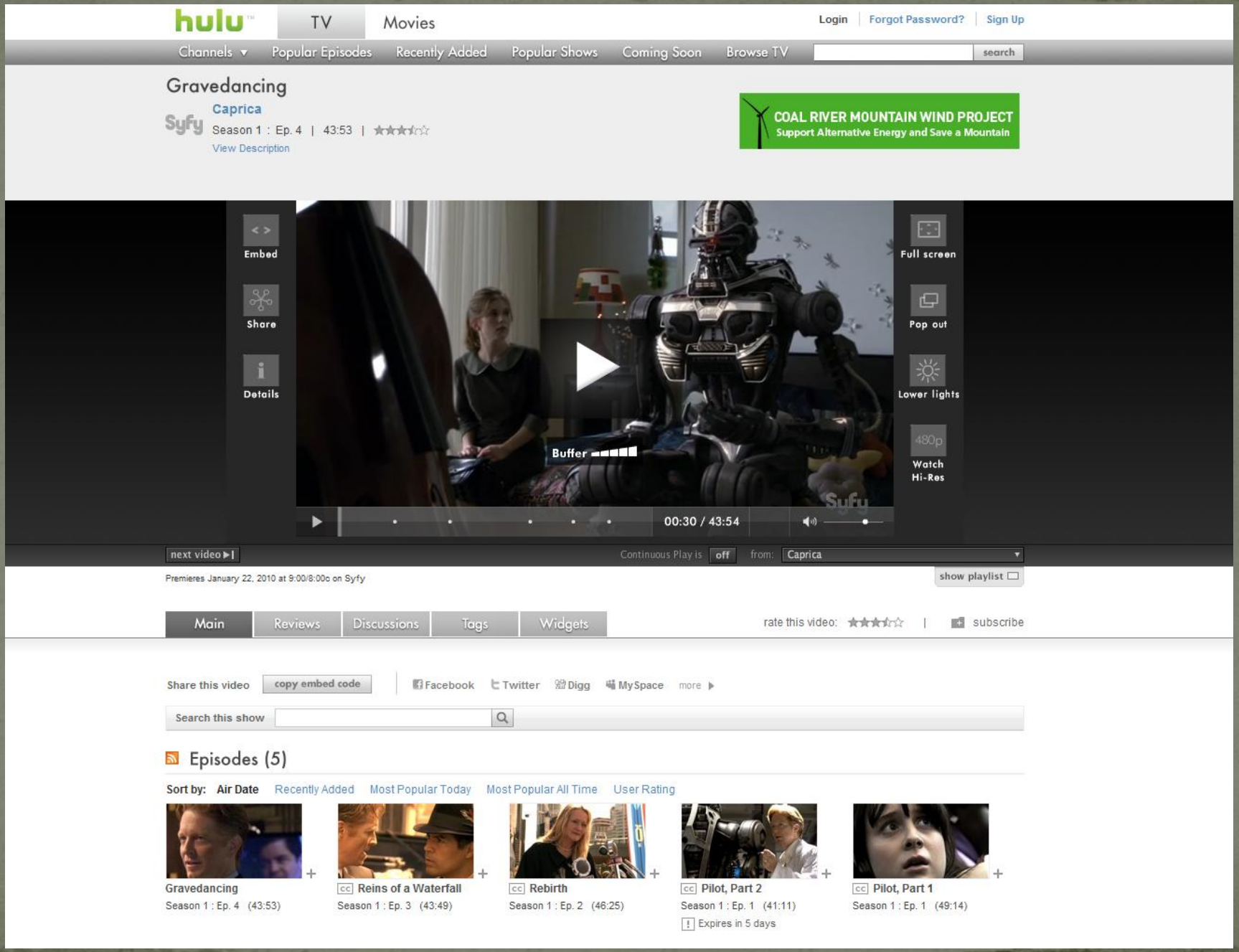
PhotoSynth

Hulu

JNES Emulator

Squarespace

Google Street View


hulu
TV
Movies
Login
Forgot Password?
Sign Up
Channels
Popular Episodes
Recently Added
Popular Shows
Coming Soon
Browse TV
search
Gravedancing
Caprica
Season 1 : Ep. 4 | 43:53 |
View Description
COAL RIVER MOUNTAIN WIND PROJECT
Support Alternative Energy and Save a Mountain
Embed
Share
Details
Full screen
Pop out
Lower lights
480p
Watch Hi-Res
Buffer
00:30 / 43:54
next video
Continuous Play is off
from: Caprica
Premieres January 22, 2010 at 9:00/8:00c on Syfy
show playlist
Main
Reviews
Discussions
Tags
Widgets
rate this video:
subscribe
Share this video
copy embed code
Facebook
Twitter
Digg
MySpace
more
Search this show
Episodes (5)
Sort by: Air Date
Recently Added
Most Popular Today
Most Popular All Time
User Rating
Gravedancing
Season 1 : Ep. 4 (43:53)
Reins of a Waterfall
Season 1 : Ep. 3 (43:49)
Rebirth
Season 1 : Ep. 2 (46:25)
Pilot, Part 2
Season 1 : Ep. 1 (41:11)
Expires in 5 days
Pilot, Part 1
Season 1 : Ep. 1 (49:14)

Work Lunch Ride

Mon, Aug 3, 2009 11:34 AM Mountain Time (US & Canada)

By micjohns

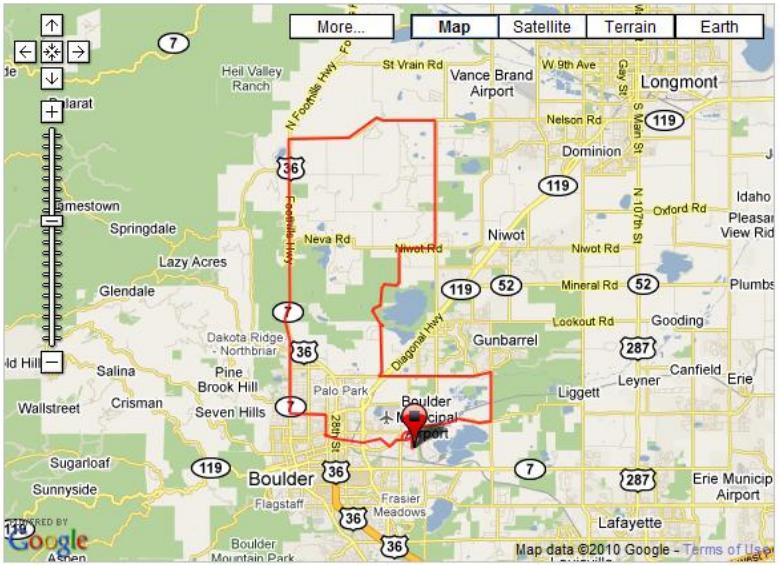
Decent lunch ride around Boulder Res.

Details | Splits | Player

Summary:

Activity Type:	Cycling
Event Type:	Uncategorized
Time:	01:48:25
Distance:	33.30 mi
Elevation Gain:	2,072 ft
Calories:	2,010 C

Share | Export | Send to Device



Timing | Elevation | Heart Rate | Cadence

Elevation:

Elevation Gain:	2,072 ft
Elevation Loss:	2,116 ft
Min Elevation:	5,069 ft
Max Elevation:	5,665 ft

back

Photosynth™

Leeds Business (Koelbel Building)

by damienallen 184 photos
1/21/2009 99% synthy

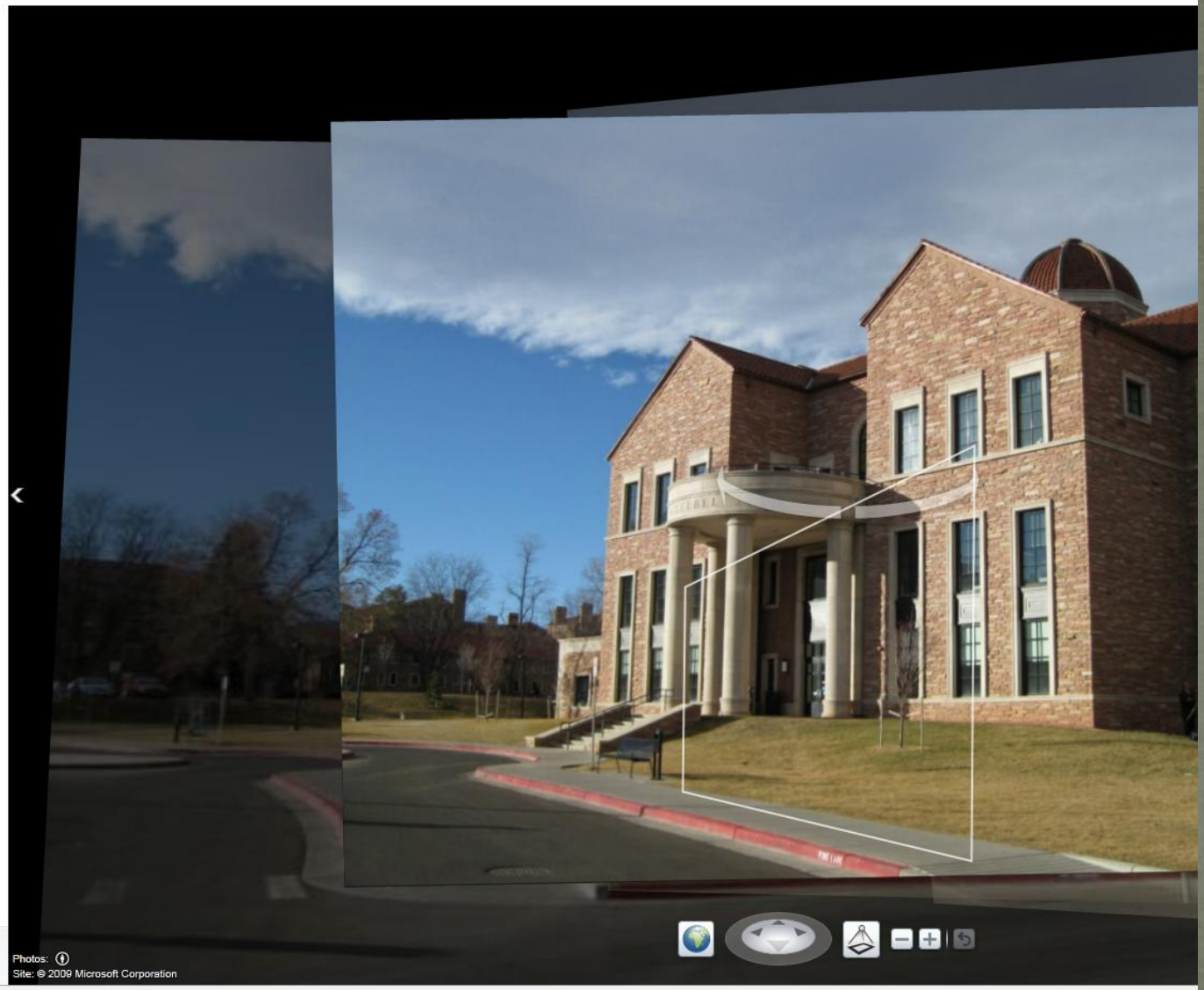
More about this Photosynth by damienallen on Photosynth.net.
Navigation Tips
Report Abuse

OTHER PHOTOSYNTHS NEARBY

See Photosynths on the map

MORE INFORMATION

At Photosynth.net:
Learn how Photosynth works.
Explore more Photosynths.
Create your own.



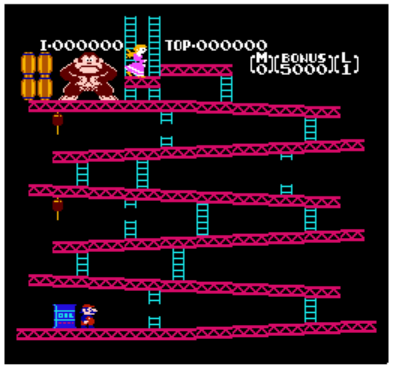
MY LEGEND MAP APPS

Find: Next Previous Highlight all Match case

Waiting for maps.slapi0.virtualearth.net...

JSNES

A JavaScript NES emulator. By Ben Firshman @bfirsh



Donkey Kong (JU).nes | pause | restart | enable sound

Running: 58.82 FPS

1214
diggs
digg it
660

Controls

Button	Player 1	Player 2
Left	Left	Num-4
Right	Right	Num-6
Up	Up	Num-8
Down	Down	Num-2
A	X	Num-7

Apps not yet in the cloud…

- Media Editing
  - Photoshop/Video Editing
- ITunes
- Development IDE
- Operating Systems

Major Players

Google – pushing HTML5 and various services

Adobe – pushing Flash

Microsoft – Pushing Silverlight, Sync, and Azure

Amazon: Cloud

Google

- Chrome OS
- Google Docs
- Open Social
- Google Maps…specifically Street View
- Google Latitude

Microsoft

- Silverlight
- Azure
- Sync
- Windows Mobile 7

Adobe

- Flash

Technology

- Flash/Silverlight
- CSS3/HTML5
- Web Services / REST
- Cloud
- JavaScript
- JSON and POX
- Browsers
- OS

Technical Breakout

- Browser …the interface
- Data …the communication
- Server…where it's at
- Cloud…where it's heading

The Browser

- The desktop application
- The window to everything
- Standards
- Offline capabilities
- JavaScript engine
  - Functional language (function is a 1st class citizen)

Data communication

- Web Services (SOAP)
- POX
- JSON
- Some challenges are…
  - Geospatial data
  - DRM

Server and the Cloud

- Provides all backend the functionality
- Process all the data
- Scalability
- Security
- Can do many more things now
  - Serve up HD video
  - Play games online

Changes from classic to rich

- Extensive use of AJAX / Xml Posts
- Use of the DOM is more important
  - Standards based browsers are more important
- Move to HTML 5
- Flash everywhere
- Developing for every device
- Services has APIs
- Cloud

What's preventing these apps

- Privacy concerns and consumer
- Browser
- Access to the power of the PC
- Free/Cheap Connectivity everywhere
- The speed of the connectivity
  - I want to watch my HD movies through Netflix and Xbox Live
  - Plug Google Fiber
- Specification/Standards
- Flawed Patent system

Issues

- Trust/Privacy
- Iteration
  - Can iterate very fast. No complicated deployment needed. Maybe too fast. The public doesn't like change. E.g. Facebook users hating new page layouts.
- How do you do DRM?
- How do you do Street View?
- The Enterprise
  - Authentication/Authorization: Security
  - Integrating with existing infrastructure, etc

Current Trends

- Flash Revolt
  - By extension also a Silverlight and plug-in revolt
- Great social ideas

Current Trends (reasoning)

- Mobile and alternative devices handle mouse cursor differently in Flash.
- Battery Life
- Poorly designed and buggy
- Proprietary

Rich Internet Applications

It is the future…it will probably be called something else by then