Welcome to NDNcomm 2015

Jeff Burke

UCLA School of Theater, Film and Television

The Future of the Internet
is the Future of Storytelling

Storytelling is the Last Mile in **Big Data and Analytics**

Stanford SOCIAL INNOVATION REVIEW

Informing and inspiring leaders of social change

Organizational Development

Building a Storytelling Culture

"C2MTL [is] a hugely inspiring and entertaining conference that explores the intersection between commerce and creativity – something that has always been central to the Virgin brand."

Forbes / Entrepreneurs

SEP 17, 2015 @ 10:30 AM   1,017 VIEWS

Here's How Interactive Content Is Growth-Hacking Brands' Storytelling Abilities

THE 4 I'S OF STORYTELLING: *OUT OF THE SCREEN, INTO MY WORLD*

IMMERSION
Can I go deeper into the story-world, by learning more about it or by heightening my sensory experience of it?

INTERACTIVITY
Can I change or influence elements of the story? Can I interact with other people around the story?

INTEGRATION
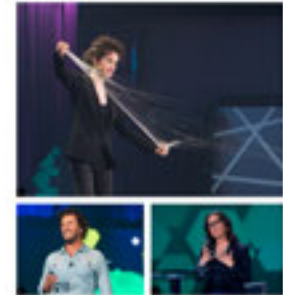Is a cohesive story being told across platforms? Can it interface with the real world in any way?

IMPACT
Does the story inspire me to take action in my own life, such as making a purchase or supporting a good cause?

THE WALL STREET JOURNAL.

CIO Journal

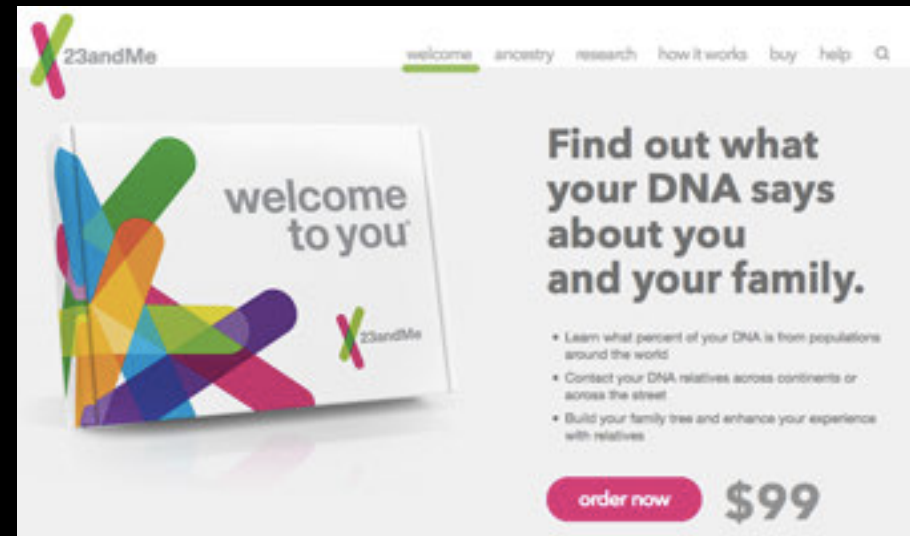Exclusive reporting and analysis for corporate-technology executives.

Technology, Marketing and Storytelling

SXSW SCHEDULE

Stories Asunder: Tales for the Internet of Things

Personal Health and Wellness

A new medical history based on personal genetics and exposure, as well as epigenetics.

Internet of Things

Coherent, engaging experiences coordinated over time and space.

Big Science

Exchange, provenance management, and public communication of huge amounts of data.
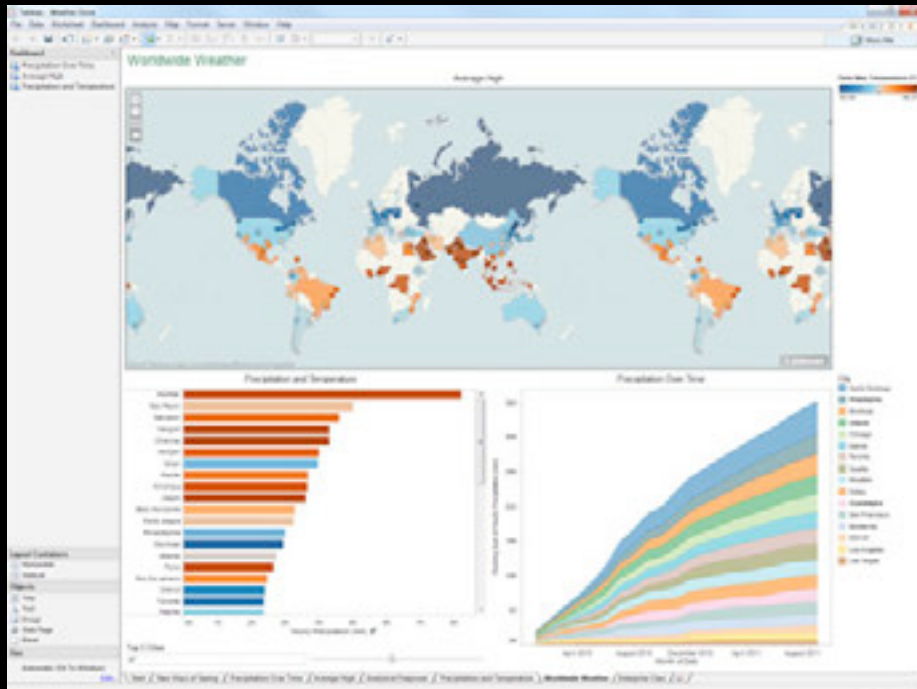
Grand Challenges

- Clouds, Circulation & Climate Sensitivity
- Melting Ice & Global Consequences
- Climate Extremes
- Regional Sea-level Change & Coastal Impacts
- Water Availability

Storytelling
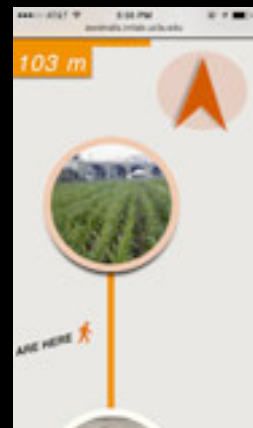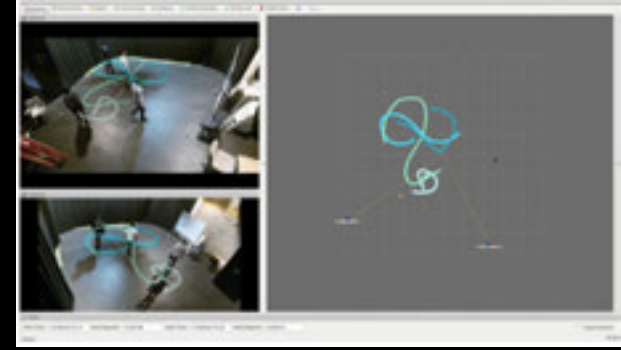
But aren't those the edges? The fringe?

Figure 1. Hype Cycle for Networking and Communications, 2015

expectations

- Cloud-Managed LANs
- WAN Optimization as a Service
- SDN Applications
- SD-WAN
- Brite-Box Switching
- 802.11ad
- 2.5/5 Gbps Ethernet
- 802.11ac Wave 2

- White-Box Switching
- Mobile Satellite Services

- Long-Distance Live VM Migration
- Network Function Virtualization

- Managed WLAN
- Network Performance Monitoring and Diagnostics Tools
- Application Performance Monitoring
- Network Configuration and Change Management Tools
- Software-Defined Networks
- Fibre Channel Over Ethernet

- WAN Path Control
- Ka Band Satellite Communications
- IPv6
- Ethernet Switching Fabric
- Cloud UC (UCaaS)

- Rich Media on Demand
- 802.11n
- Application Delivery Controller
- VoIP Over WLAN
- Network Fault Management
- Virtual Switch
- Unified Communications and Collaboration
- Ethernet Services
- Hybrid WAN
- 802.11ac Wave 1

- Advanced Underserved Area Comms
- Named Data Networking

As of July 2015

| Innovation Trigger | Peak of Inflated Expectations | Trough of Disillusionment | Slope of Enlightenment | Plateau of Productivity |

time

Plateau will be reached in:

○ less than 2 years   ◔ 2 to 5 years   ● 5 to 10 years   △ more than 10 years   ⊗ obsolete before plateau

If we are asking people to look ahead in networking, let's look ahead to the applications that are coming.

At the edges

For example,

- Multimedia experiences are created by designers and storytellers based on available technologies.

- Occasionally their goals directly motivate technologies.

- What motivates designers, storytellers, inventors, entrepreneurs...?

- The edges: of aesthetics, storytelling, interaction, design, etc.

What do the edges do?
Reformulate the Problem

"It is widely accepted that creative design is not a matter of first fixing the problem and then searching for a satisfactory solution concept; instead it seems more to be a matter of developing and refining together both the formulation of the problem and ideas for its solution..."
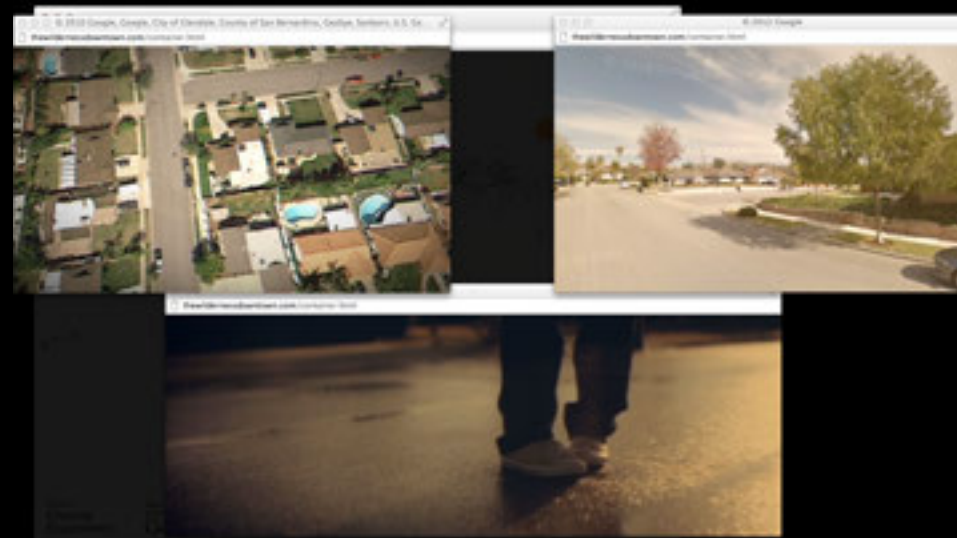
- Cross & Dorst (1999), quoted by Brooks (2010)

Example:
Streaming video content will not stay static

Maze Runner (2014), Fox

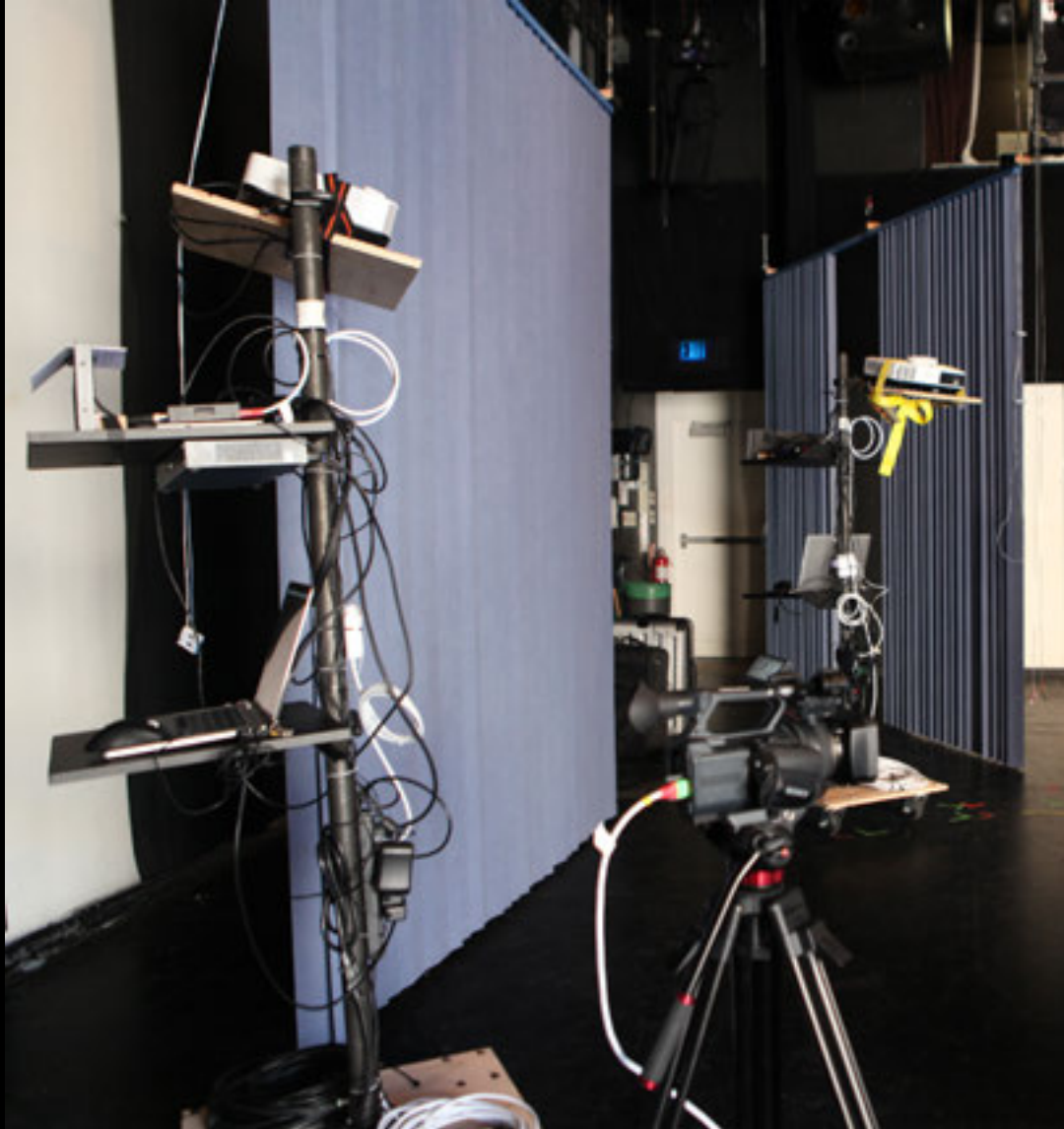The Wilderness Downtown

Los Atlantis (UCLA, 2015)
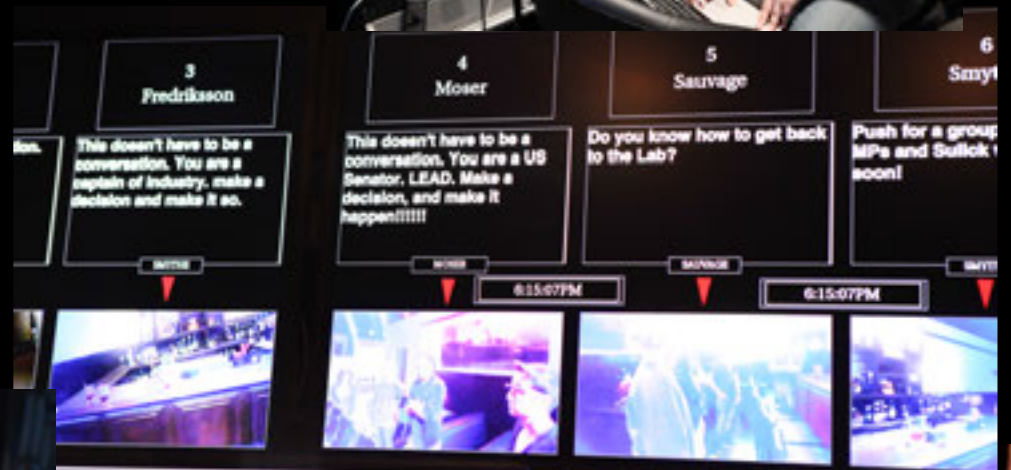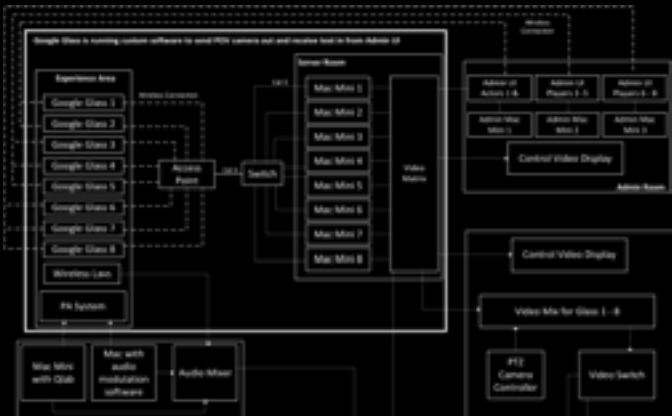
NDN Thought Experiment:

How to best enable just-in-time client-side composability of streaming media elements?

"Expeditionary Networks"
are more common than you think

4 x Mobile Projector Tower
3-16Mbit/s down, 6+Mbit/s up ea.
NDN control

Grace Plains: Live-action Role Playing with Google Glass (2014)

http://graceplains.com/

NDN Thought Experiment:

Is IP-related brittleness holding us back
from making more *expeditionary* networks?

Going forward: What does this mean for NDN?

On NDN, app reformulation starts with the design of its namespace.

Storytelling apps from this year already using hierarchical data:

- Scene graphs for streaming 3D (Game engines)
- Processing networks for streaming 2D (Touchdesigner)
- App-level protocols in experimental multimedia (Open Sound Control)
- Message bus protocols (Robot Operating System)

But, mapping namespaces directly may not provide all the benefits it could...

=> Tussle between app, security, network requirements for naming is really challenging.

=> Efficient mechanisms for exchanging named data motivate more work on namespace synchronization as a higher level transport.

"It is widely accepted that creative design is not a matter of first fixing the problem and then searching for a satisfactory solution concept; instead it seems more to be a matter of developing and refining together both the formulation of the problem and ideas for its solution..."

- Cross & Dorst (1999), quoted by Brooks (2010)