New TV experiences and network implications

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What is your most memorable experience watching a video or TV screen?

Some survey results

- 70% of responses were not in respondent's own living room

- Almost all responses involved groups of people

- Responses included both nationally significant events (sporting events, national tragedies, etc.) as well as very personal, private experiences

Most memorable of the memorable experiences described so far

- "Taking my son to a Red Sox game and seeing his excitement when he got onto the jumbotron."

- Didn't remember score of the game, who the Red Sox were playing, or anything else

- Joy just watching his son attempting to get on the jumbotron ("training of a Red Sox fan")

Broadband Fan Cams

- Expand the fan cam experience beyond the arenas and stadiums

- Real time blending of professional video content with user content

- Extrapolating and expanding what users and producers are already doing

Producers cut to soldiers watching the Super Bowl in Afghanistan

Fan reaction videos on youtube

Our research in CSAIL

- Seeks to address the technical, economic and regulatory challenges underlying such a vision
- Many different ways of architecting such a system involving choices of technologies and actors
- Some common underlying research challenges

Do we have an network that can support such a system?

- Next generation broadband metrics
    - Reliability metrics
    - Measuring user experience
    - Measurements by regulatory authorities
    - Mobile broadband measurements

Will broadband access networks and content and services providers cooperate?

- Understanding and measuring congestion at interconnection points
  - Previous focus was on access network measurements
  - Next focus is on interconnection between access providers and content and service providers
  - Important regulatory implications

How do the economic and regulatory paradigms governing the Internet evolve?

- Broadband investment and traffic growth
- Evolution of service options (i.e. usage tiers, etc)
- Internet governance