Time to Get Serious with Interactive TV
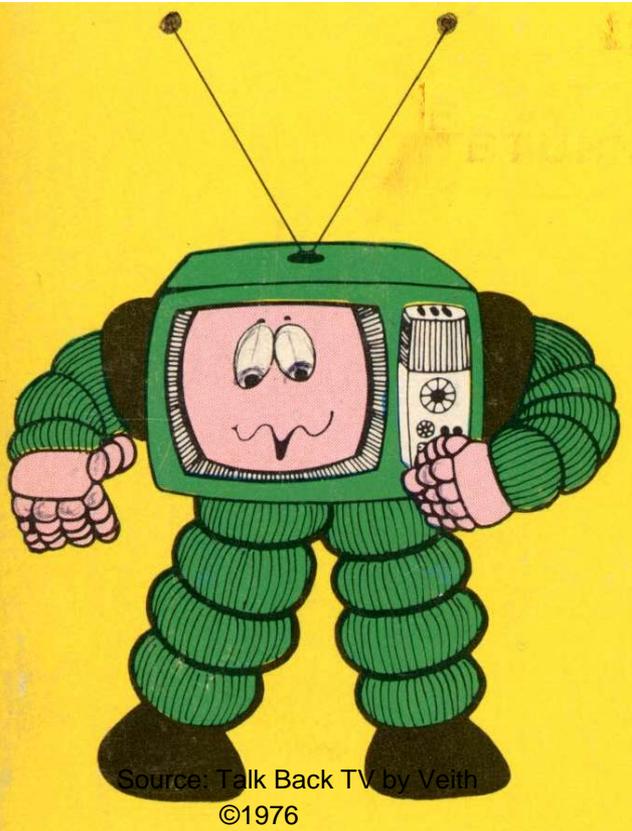
Source: Talk Back TV by Veith
©1976

2011 Broadcasters Clinic
October 11-13, 2011
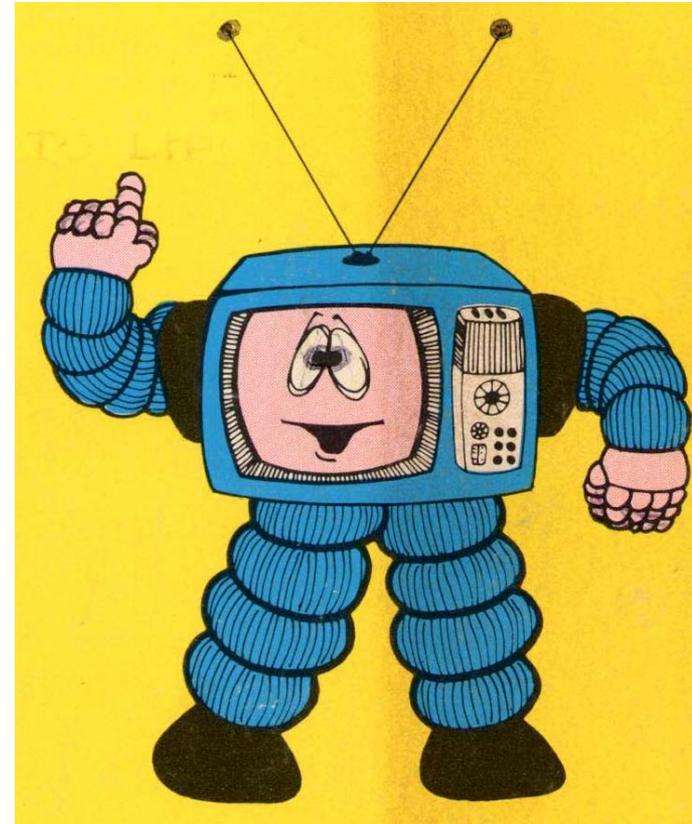
Stuart Lipoff
IP Action Partners

IPaP
IP Action Partners
192 Kirkstall Road
web www.ipaction.com

iTV >30 year incubation but now we have a perfect storm

- EBIF & OCAP Middleware in STBs

- Always on connectivity in homes and mobile

- ATSC/MH for cellphones has an interactive profile

- Switched Digital Video & Advanced Audience Measurement Systems in multichannel video

- Demonstrated consumer interest, e.g.
  - AT&T reports >78million SMS votes during American Idol in 2008 grew >178M in 2009

Intel's Smart TV Vision

The Intel Vision Include a Number of Bound and UnBound Interactive Applications Which Had Several Common Concepts

- Interactive Advertising, Shopping, and Video eCommerce
- Advanced Human Interfaces
  - —GUI
  - —Voice Recognition
- TV Extras Enhancements to Linear TV
- Artificial Intelligence Expert System Recommendation Engine
- Access to Online Internet Content on the TV Screen
- Social Networking by Text and Video Conferencing
- Sharing of Photo, Video, and Other Content

Historical Perspective
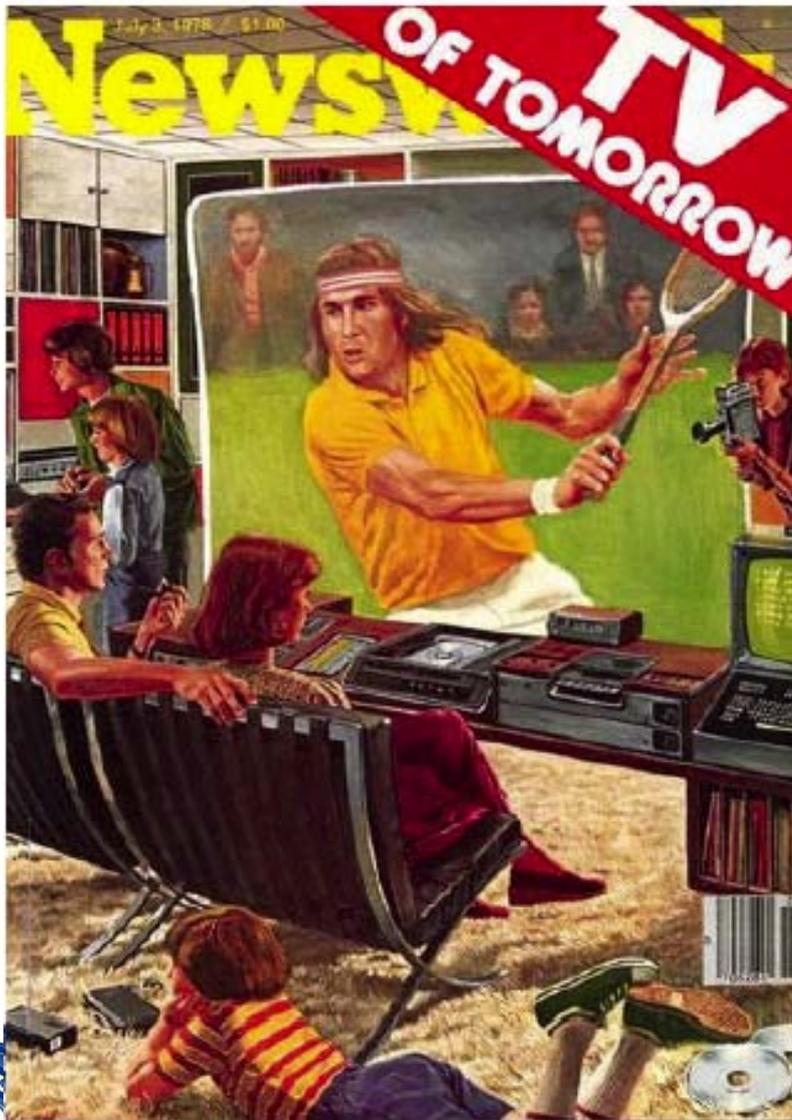
For a very long time interactive TV (iTV) has been TV of Tomorrow

Historical Perspective

For a very long time interactive TV (iTV) has been TV of Tomorrow

July 3, 1978

Historical Perspective

The vision has not changed much either

Warner QUBE Terminal
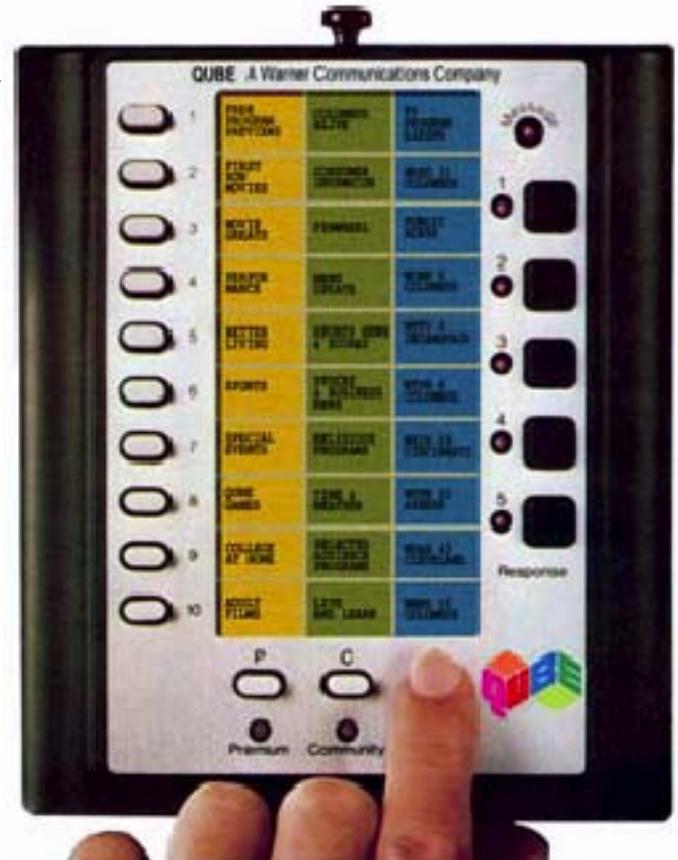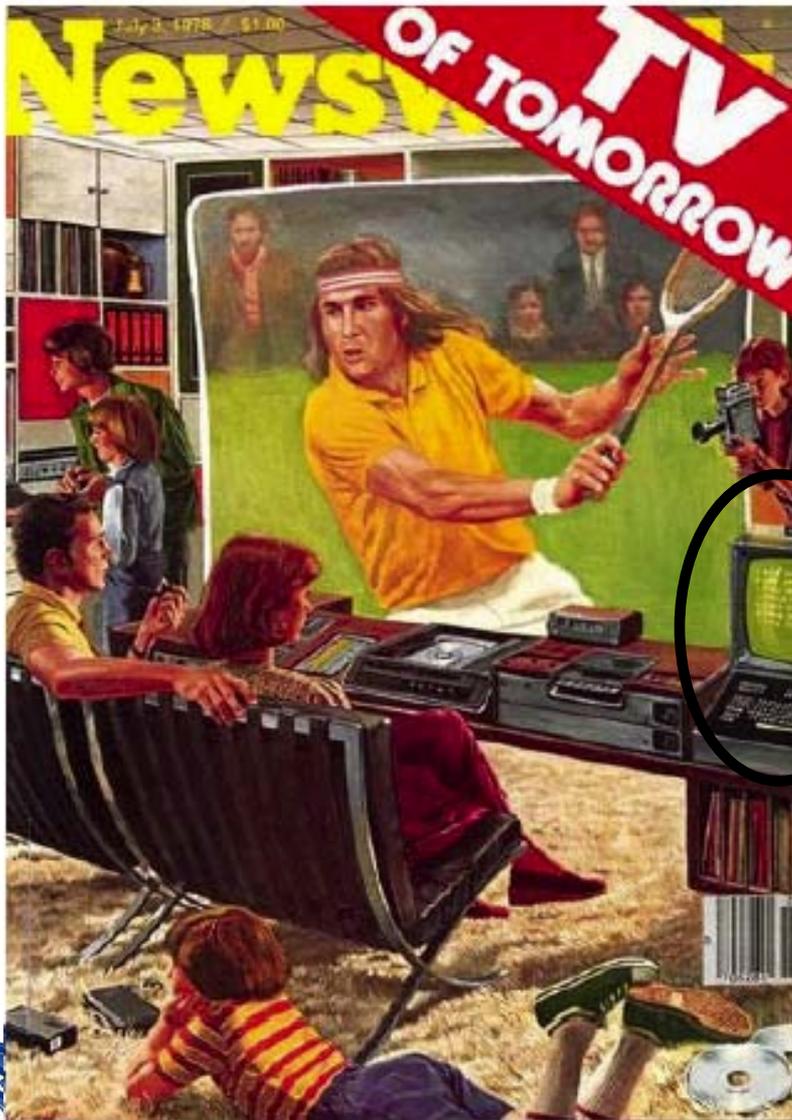
The vision has not changed much either

Commodore PET Computer

Historical Perspective

The vision has not changed much either

30cm Laserdisc Player

Historical Perspective

The vision has not changed much either

Atari 2600VCS Video Game

Historical Perspective

1978 is recent history compared to Winky Dink of 1953

Historical Perspective

1978 is recent history compared to Zenith's Remote of 1956

Historical Perspective

And a bunch of other stuff since 1978

GTE MainStreet Cable Service
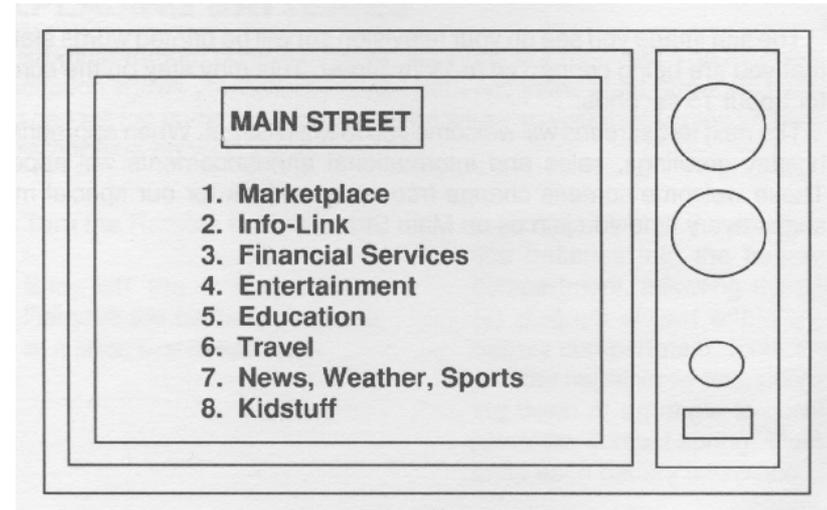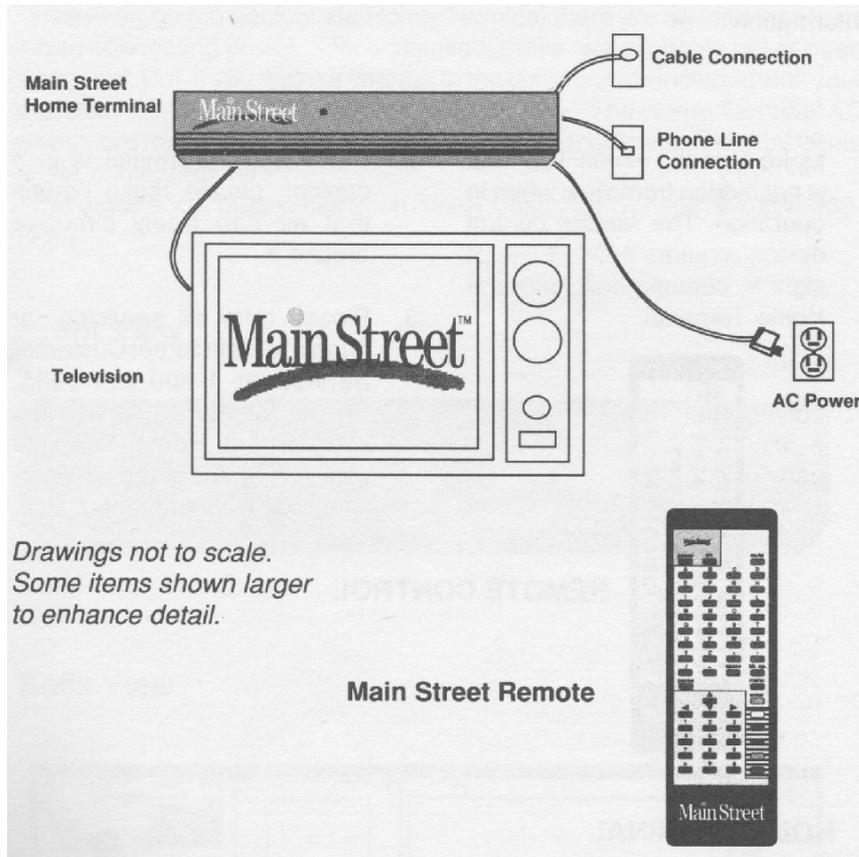
Service started 1988

And a bunch of other stuff since 1978

Philips CDI Player

R&D began 1984 released for sale 1991

Historical Perspective

And a bunch of other stuff since 1978

TiVO and Replay DVRs

Introduced 1999

Historical Perspective

And a bunch of other stuff since 1978

Time Warner Cable Full Service Network in Orlando
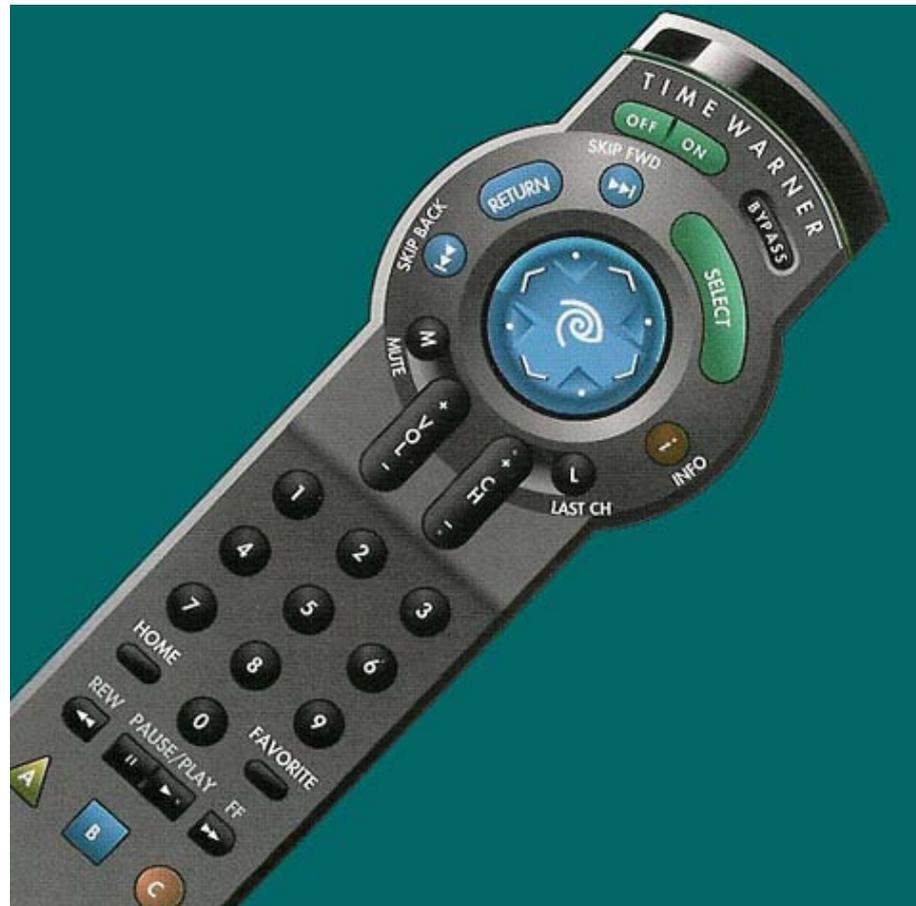
Service began 1994

And a bunch of other stuff since 1978

TV Answer's IVDS Wireless 218MHz System
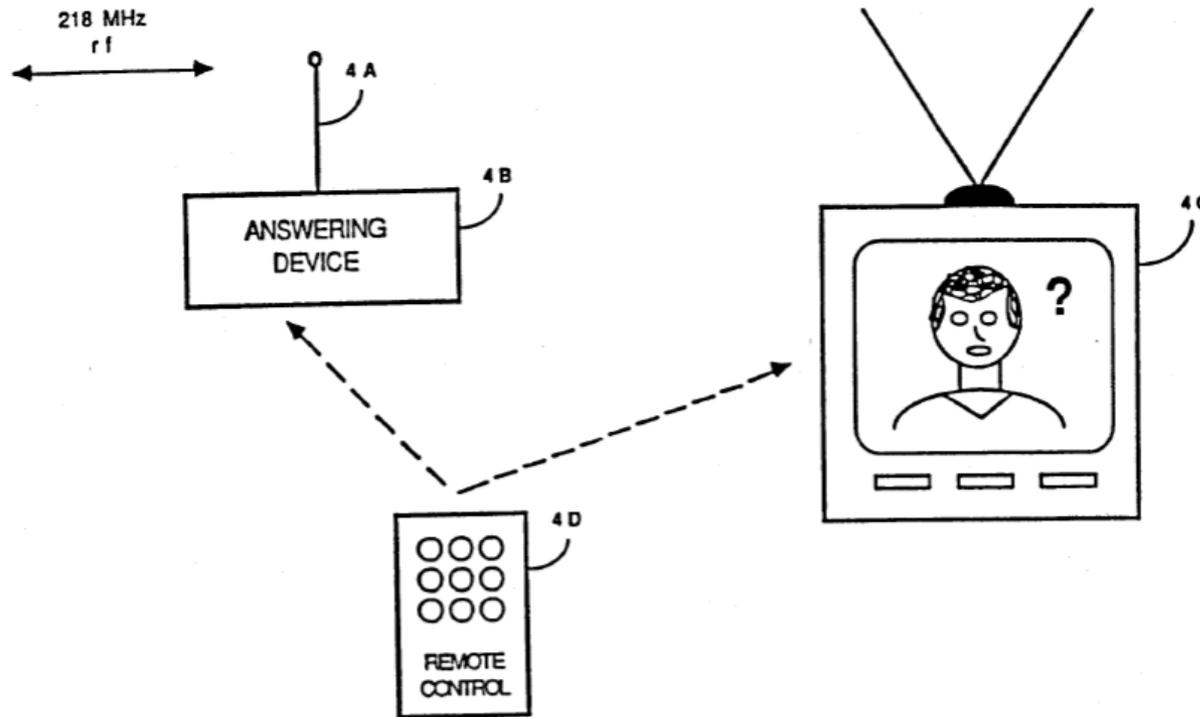
Source: US Patent 5101267]
Filed Aug 7, 1989

Historical Perspective

And a bunch of other stuff since 1978

Qualcomm's MediaFLO Smart Phone Service with Interactive Profile

Historical Perspective

And a bunch of other stuff since 1978

Qualcomm's MediaFLO Smart Phone Service with Interactive Profile

Personalized Homescreen

Historical Perspective

And a bunch of other stuff since 1978

Qualcomm's MediaFLO Smart Phone Service with Interactive Profile

Unified Guide

Historical Perspective

And a bunch of other stuff since 1978

Qualcomm's MediaFLO Smart Phone Service with Interactive Profile

Historical Perspective

And a bunch of other stuff since 1978

Qualcomm's MediaFLO Smart Phone Service with Interactive Profile

Interactive Advertising

Historical Perspective

And a bunch of other stuff since 1978

Qualcomm's MediaFLO Smart Phone Service with Interactive Profile
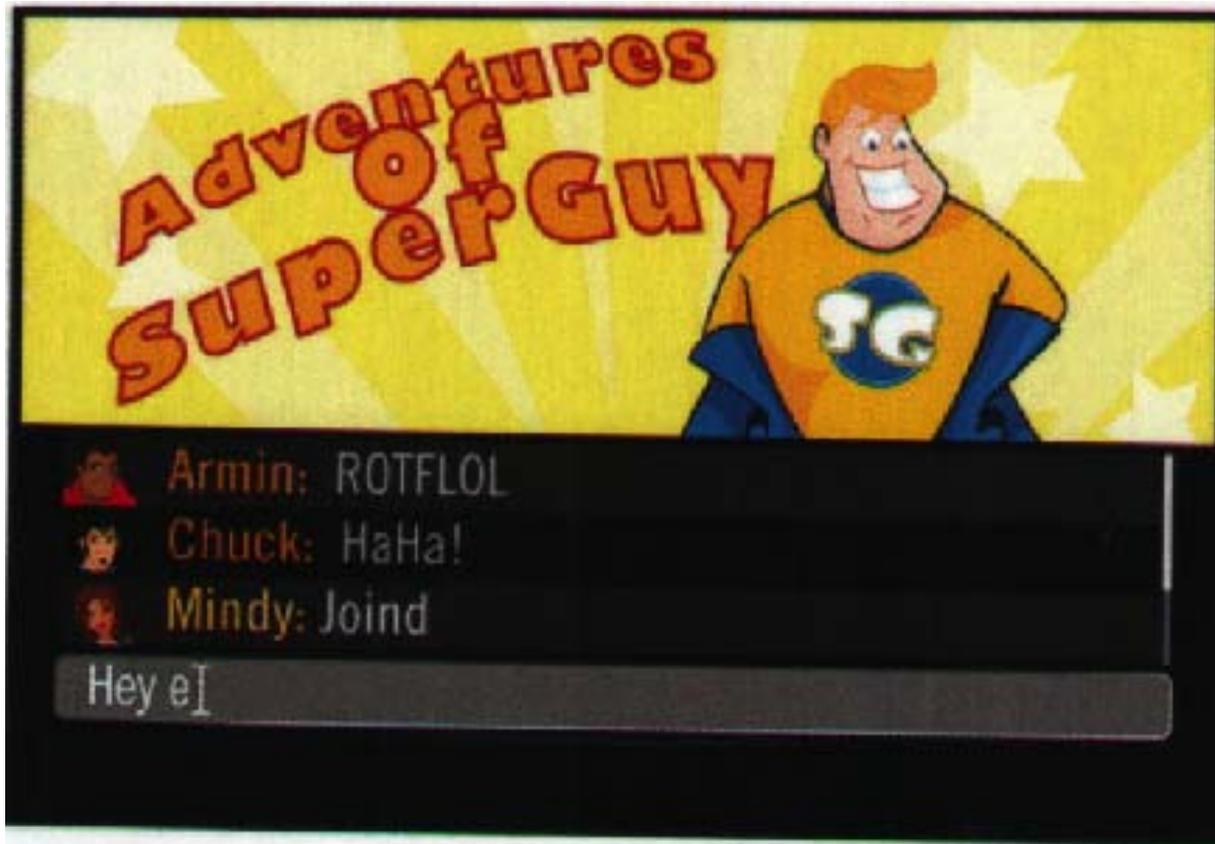
And a bunch of other stuff since 1978

Qualcomm's MediaFLO Smart Phone Service with Interactive Profile

Jukebox/Merchandising

What video should US Idol Jukebox play next?
Sarah Voight "I Kissed A Boy"
JoHanna "Take Five"
Chris Blue "Forever Together"

Historical Perspective

And a bunch of other stuff since 1978

## Qualcomm's MediaFLO Smart Phone Service with Interactive Profile
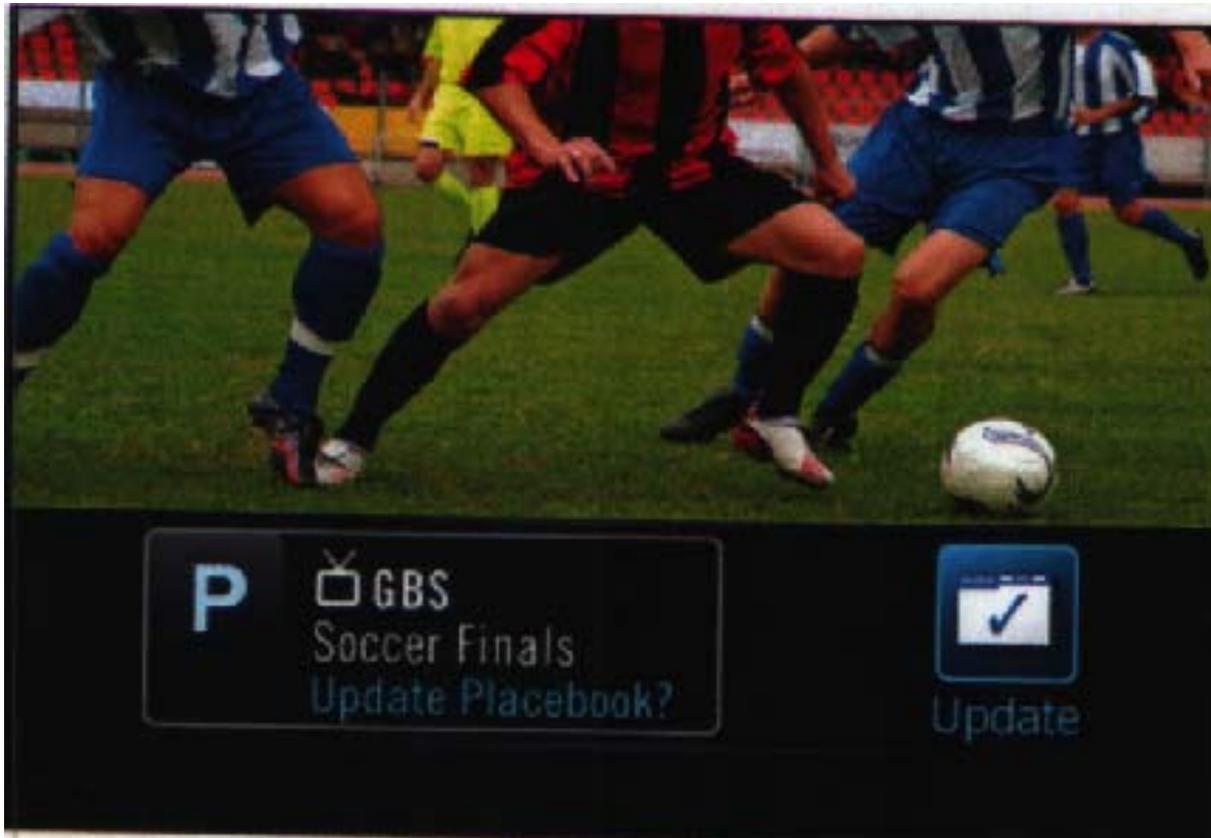
Historical Perspective

And a bunch of other stuff since 1978

Qualcomm's MediaFLO Smart Phone Service with Interactive Profile

Historical Perspective

And a bunch of other stuff since 1978

**Qualcomm's MediaFLO Smart Phone Service with Interactive Profile**


Program Reminders

Historical Perspective

And a bunch of other stuff since 1978

Qualcomm's MediaFLO Smart Phone Service with Interactive Profile
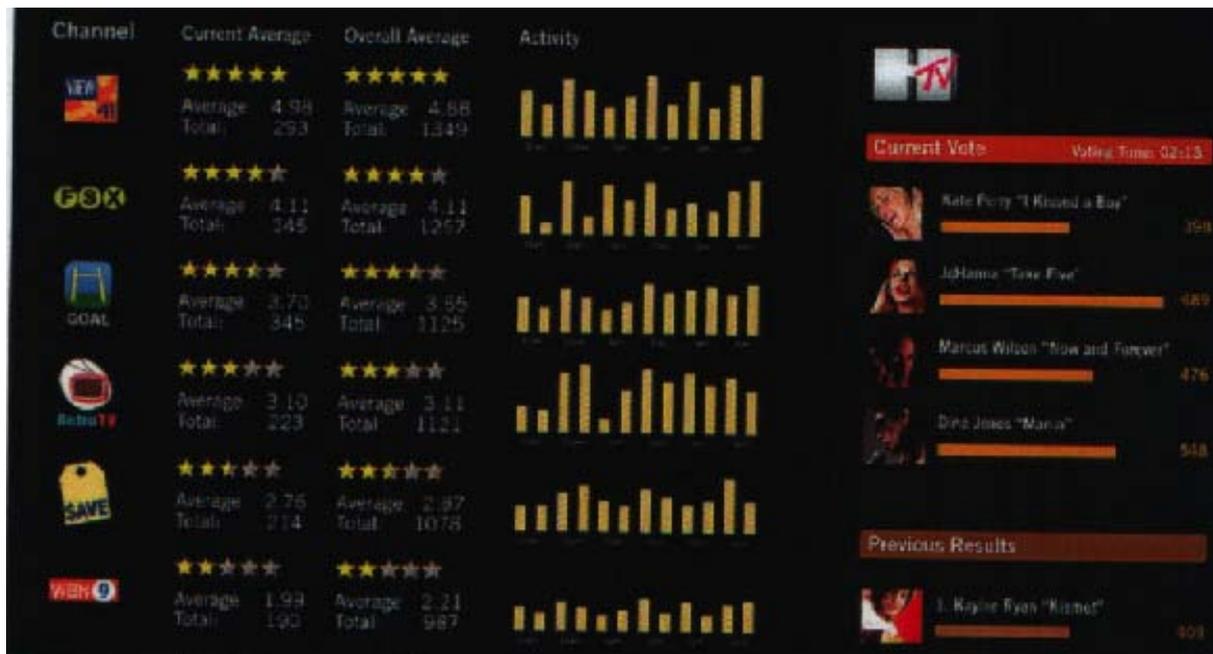
And a bunch of other stuff since 1978

Yahoo Connected TV
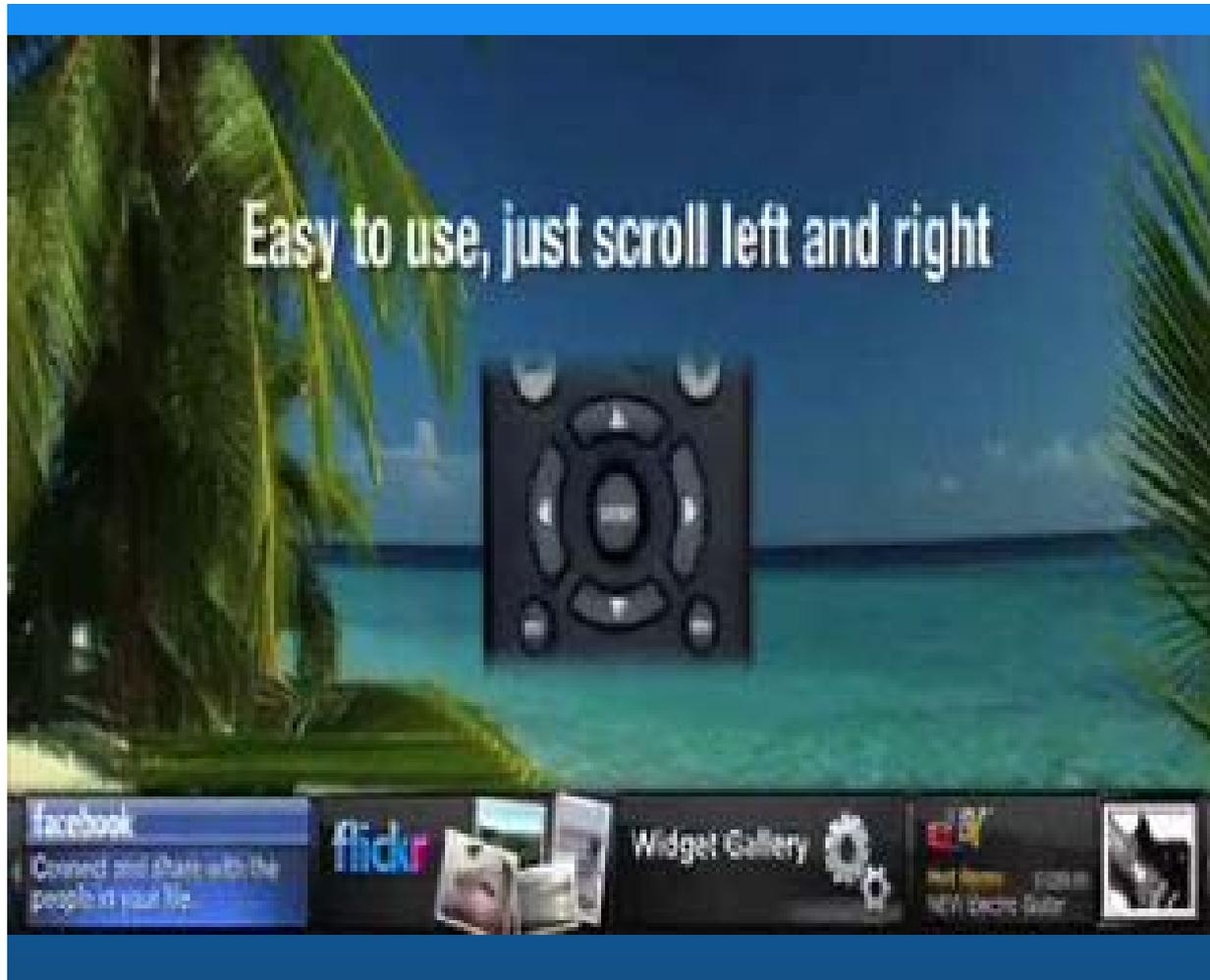
Current ITV Technology

Currently we have

- Yahoo Connected TV Widgets

- Smart Phones

- Video Enabled PCs

- Multiple Platforms
  - —Connected TVs
  - —iTV Appliances (e.g. AppleTV)
  - —Game Consoles (e.g. Xbox)
  - —BluRay Players
  - —Cable STBs with EBIF or OpenCable/TruTV/OCAP

- Enabling Middleware

Enabling Middleware

Proprietary

- NDS
- Liberate
- OpenTV
- MSTV
- Media Highway

Standard Based

Enabling Middleware

Proprietary

- NDS
- Liberate
- OpenTV
- MSTV
- Media Highway

Standard Based

MHP 1.1 → MHP 1.1.1

OCAP 1.0 → **OpenCable** [OCAP 2.0] **Tru2Way**

MHP 1.0.2 → GEM → MHP 1.0.3

GEM → ARIB B.23

JavaTV → DASE → ACAP

GEM → ACAP
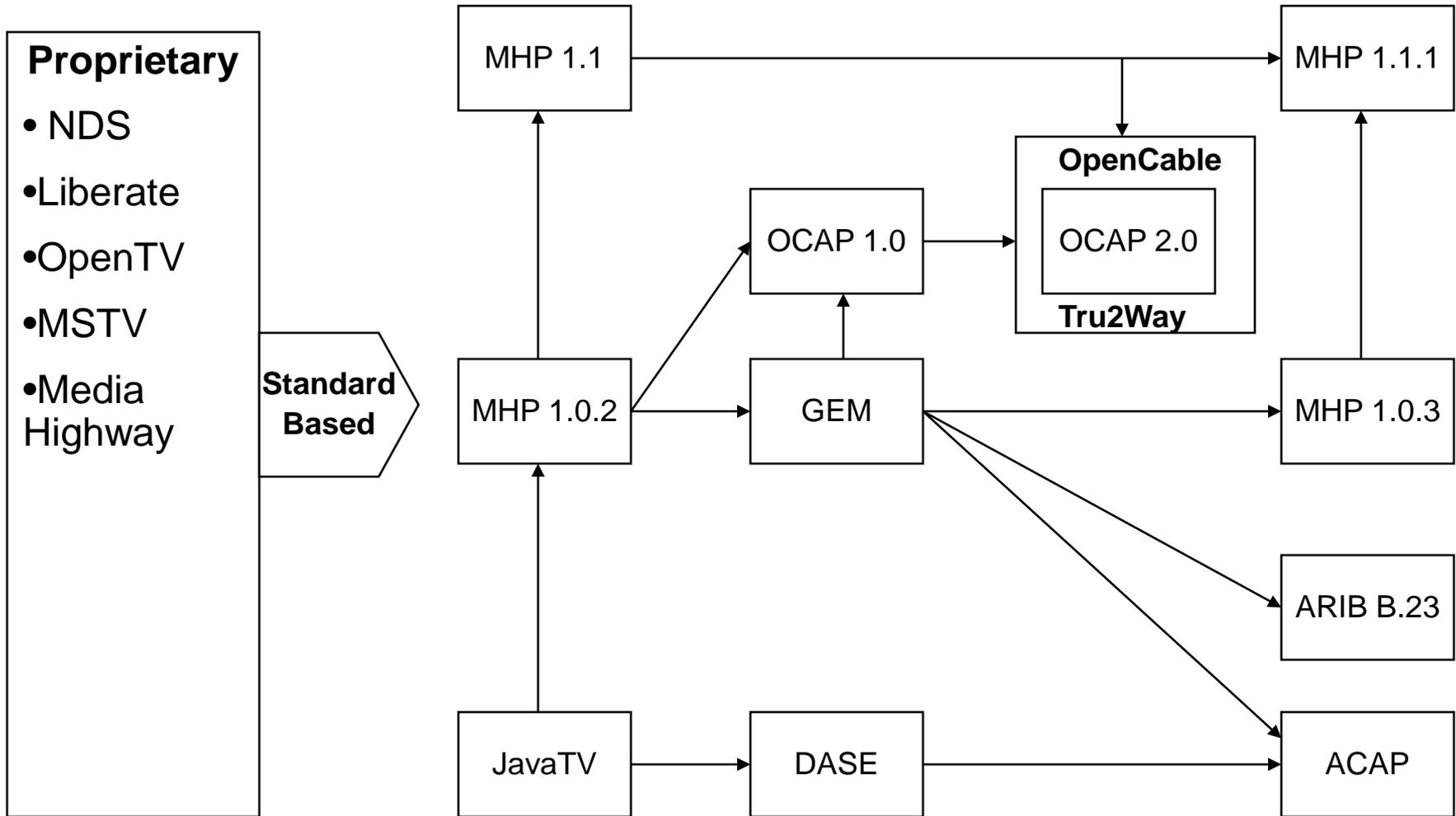
A new idea can seem to incubate forever until inhibitors are overcome
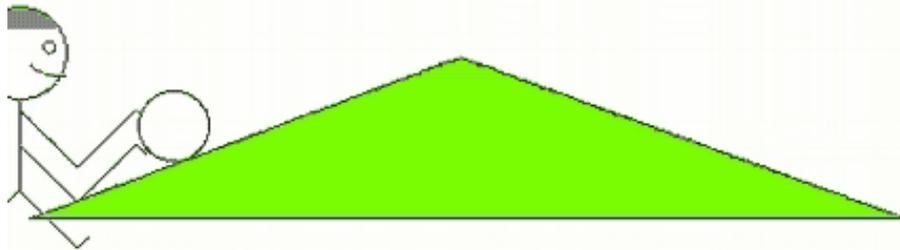
Inhibitors
- Infrastructure
- Standards
- Technology limitations
- Government
- Content
- Social acceptance

CODE   33

The dynamics can change rapidly once you get over the hill

Inhibitors	Accelerators
• Infrastructure	• Network effects
• Standards	• Synergies
• Technology limitations	• Competition
• Government	• Economies of scale
• Content	
• Social acceptance	

The Interactive TV Playing Field

Creative people will likely vastly expand what is already a long list

Delivery Modality	Bound Applications	
	Subscriber Initiated	**System Initiated**
Real Time Wired Network Services	• Advertising response • Opinion polling	• Audience measurement • Synthetic channels
Real Time Wireless Network Services	• Deep dive • Gaming	• Advertising insertion • Content advice
Intelligent Customer Premise Devices	• Content determination • Subscriber generated	• Content push