SBTVD Overview

Session 2
Digital TV Outlook
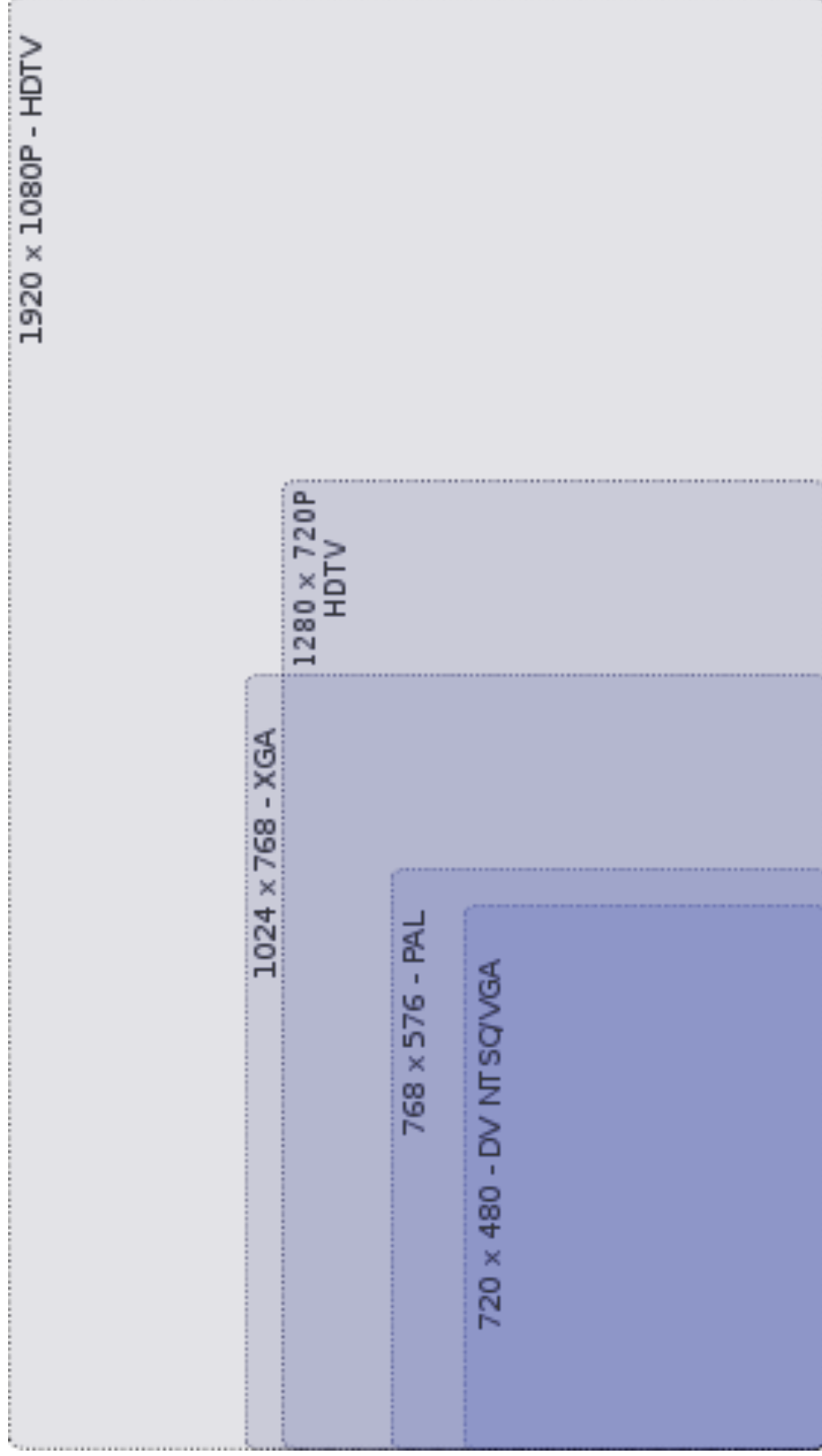
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Sensation Changes

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Analog X Digital TV

1920 x 1080P - HDTV

1280 x 720P HDTV

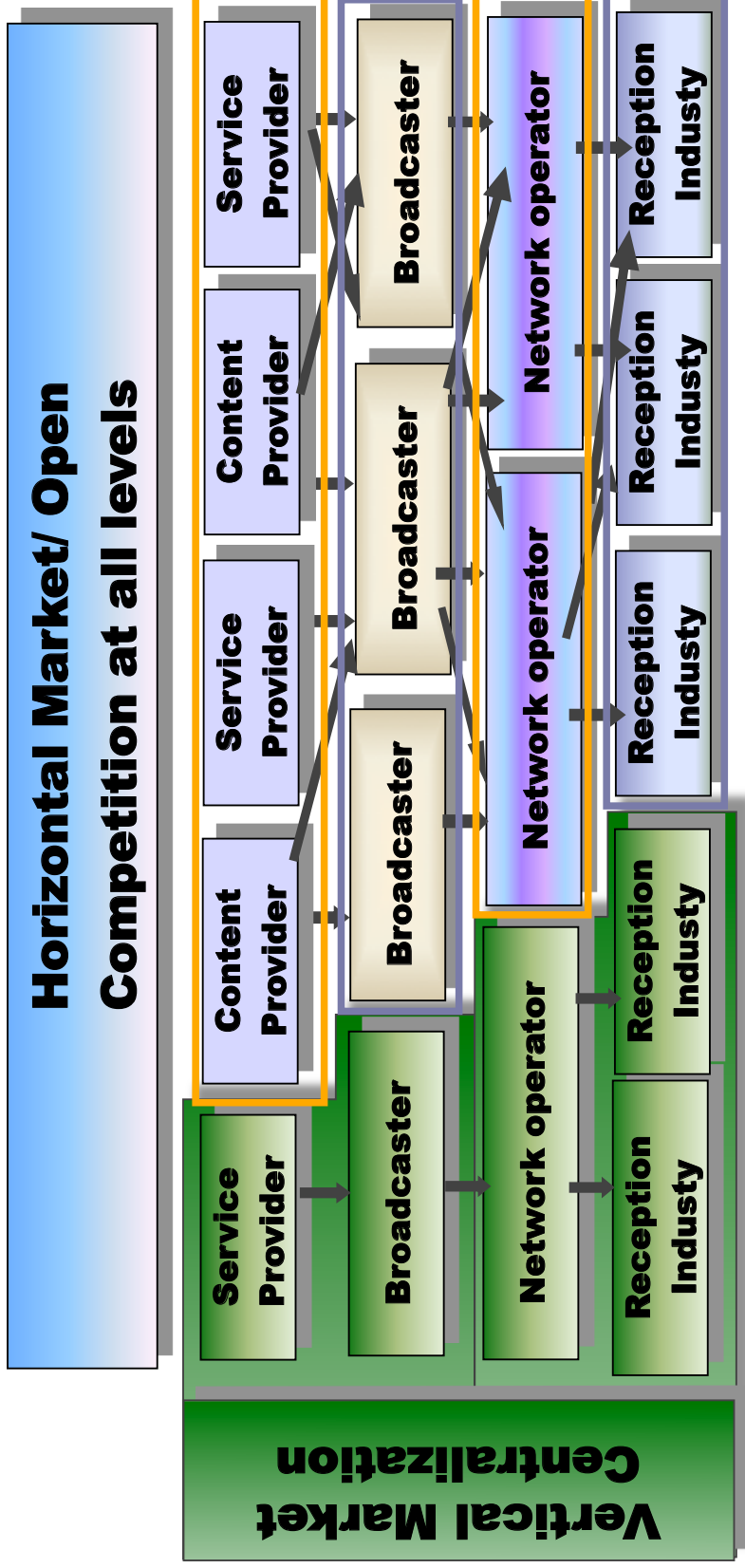1024 x 768 - XGA
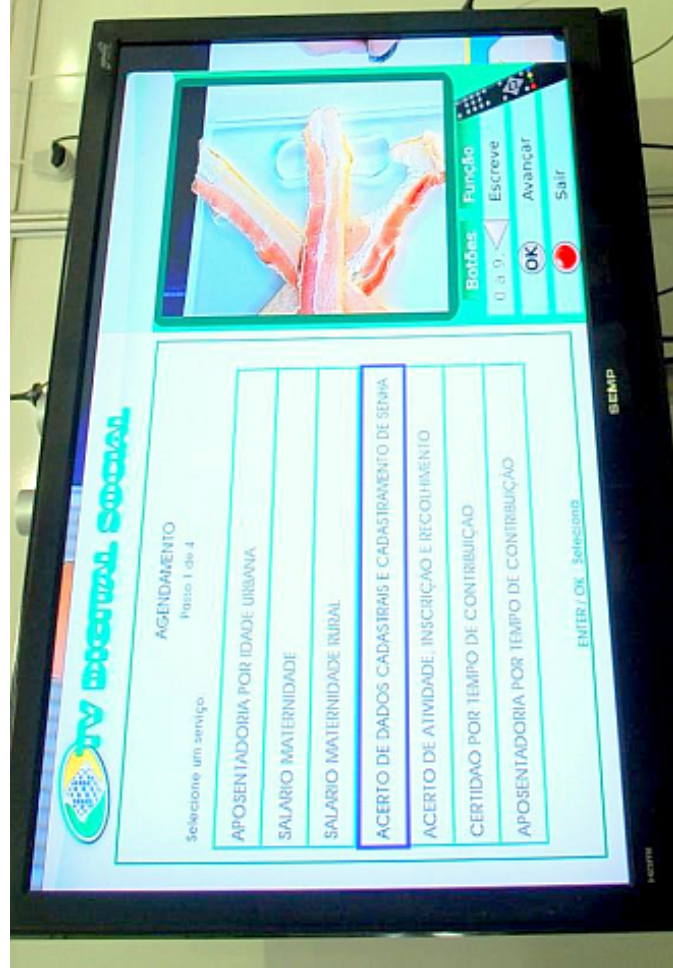
768 x 576 - PAL

720 x 480 - DV NT SQ/VGA

Habits Changes

Market Changes

▶ Vertical X Horizontal Market

▶ Open Standards

More Changes ? Digital Inclusion

More changes? Convergent Network

Television cell

UMTS or GPRS cell

Terminal

Cellular network

Internet

Content Server

Television radio network

IP - based television fixed network

Content Server

download flow

upload flow

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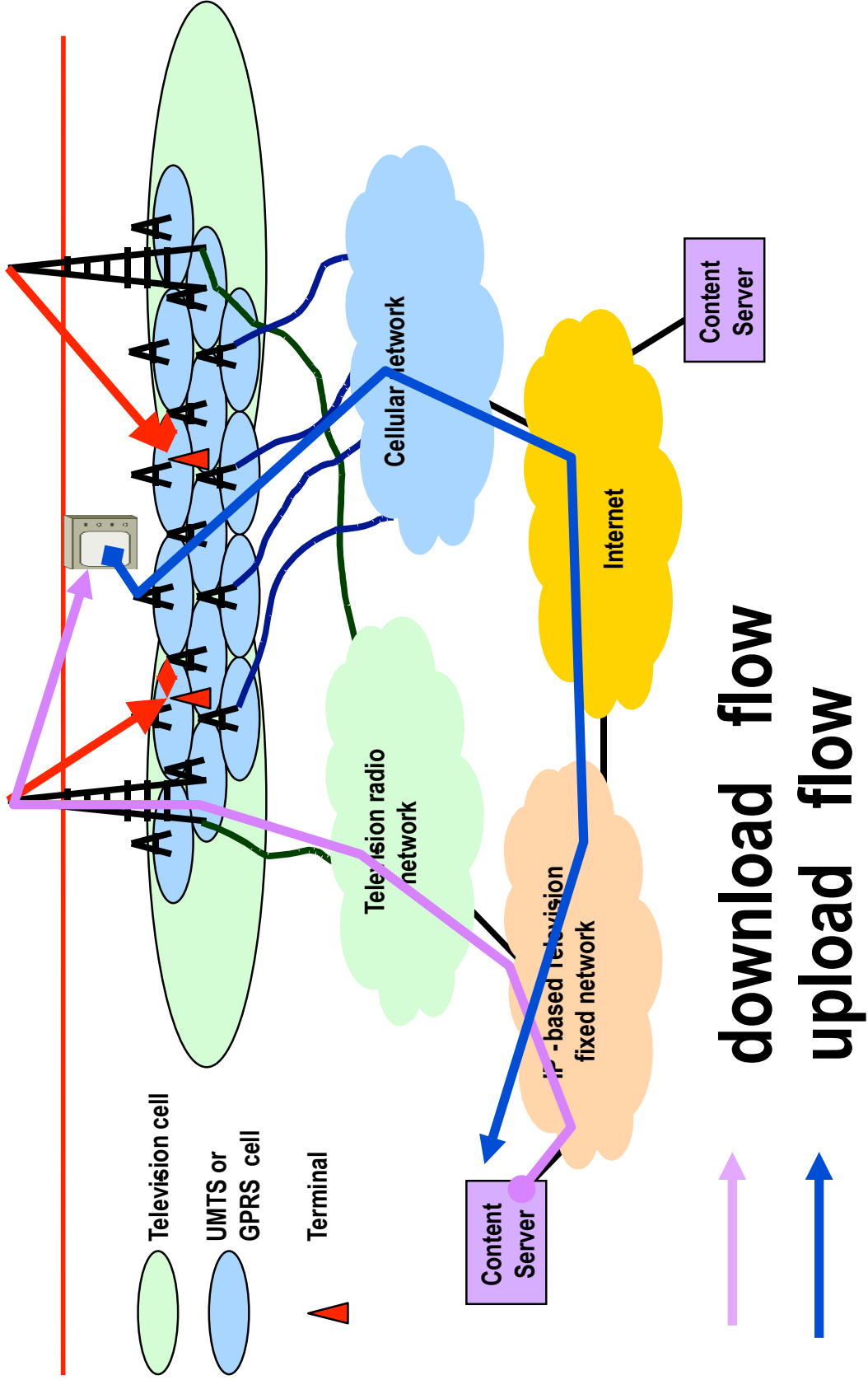
More changes? Hybrid TV
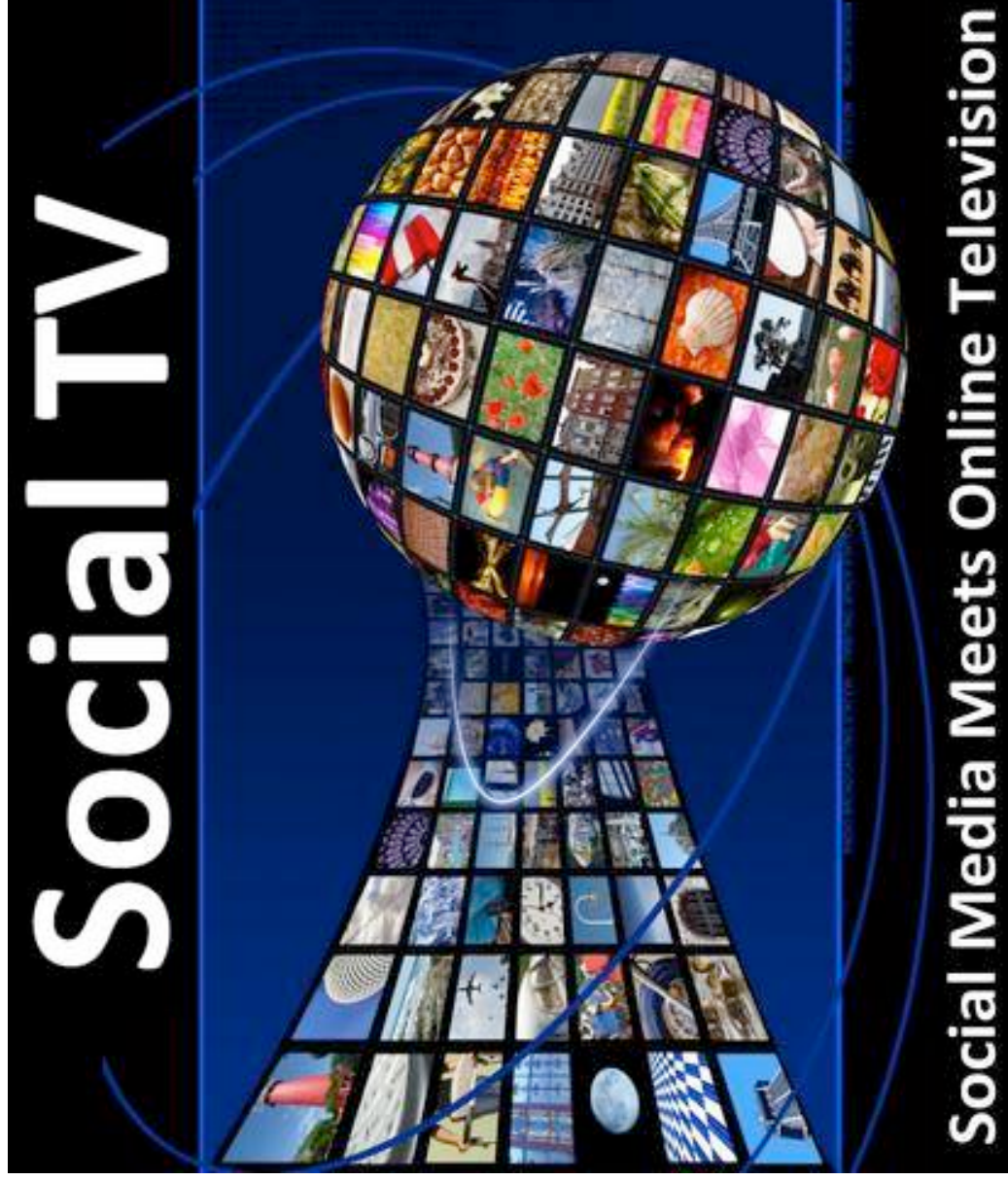
Interativity categories

- **Local Interactivity**

- **Interactivity with Return Channel to Broadcast (Walled Garden)**
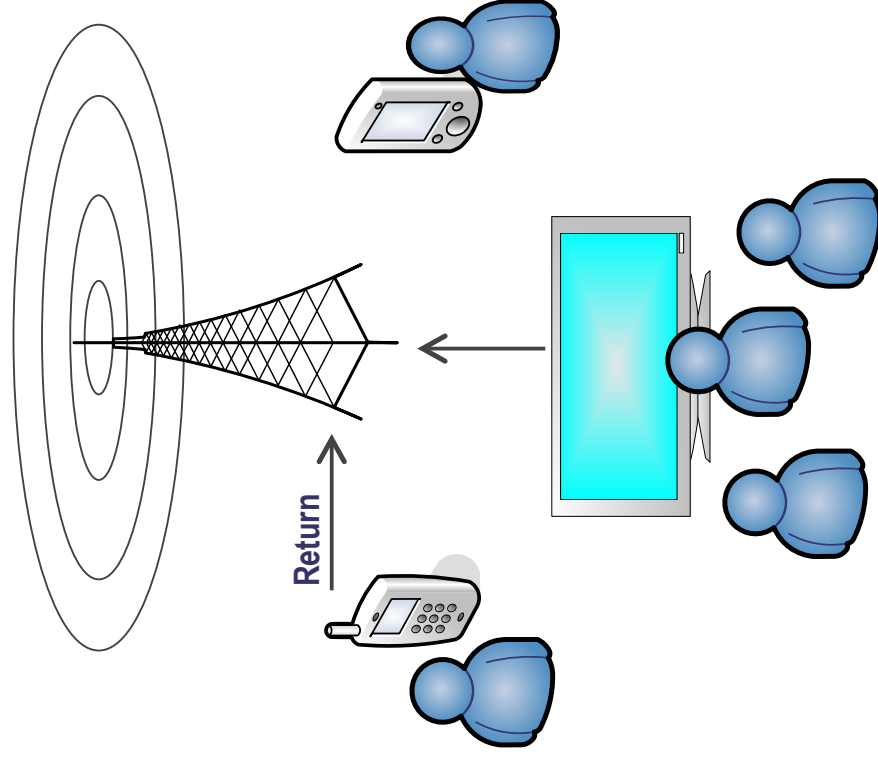
- **Interactivity with Return Channel to Internet**

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Conventional TV X New TV

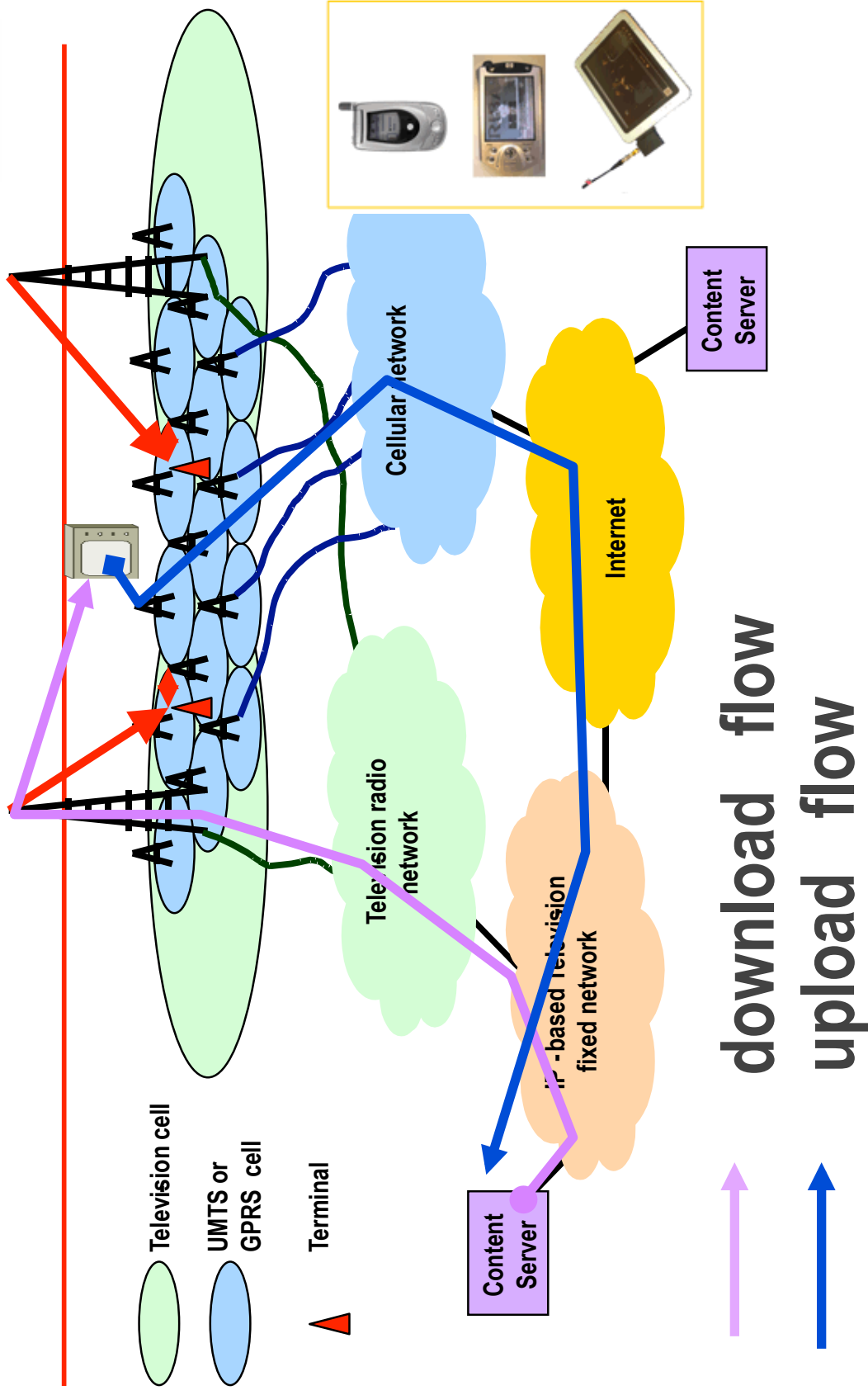| Conventional	New
Linear transmission	On demand transmission
Broadcast distribution	Individual/Niches Distribution
Content-centric	User-centric
Broadcast Program Schedule	Stand-alone program
Program, Genres and Formats	Tags, filters, and search maps
Season/Series(chapters and blocks)	Fragmentation
Units not finished	Closed units
Repeatable Content	Specific content
Advertisement between blocks...	No blocks / No Advertisement

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Challenges

- **Diversity of receivers with different capabilities and features (display, processor, input device)**
- **Diversity of transmission network and communication technologies**
- **Large number of users, with different preferences and goals.**
- **Eventually more than one user per terminal.**
- **All users in a channel receive the same content simultaneously.**
- **User passive mode.**
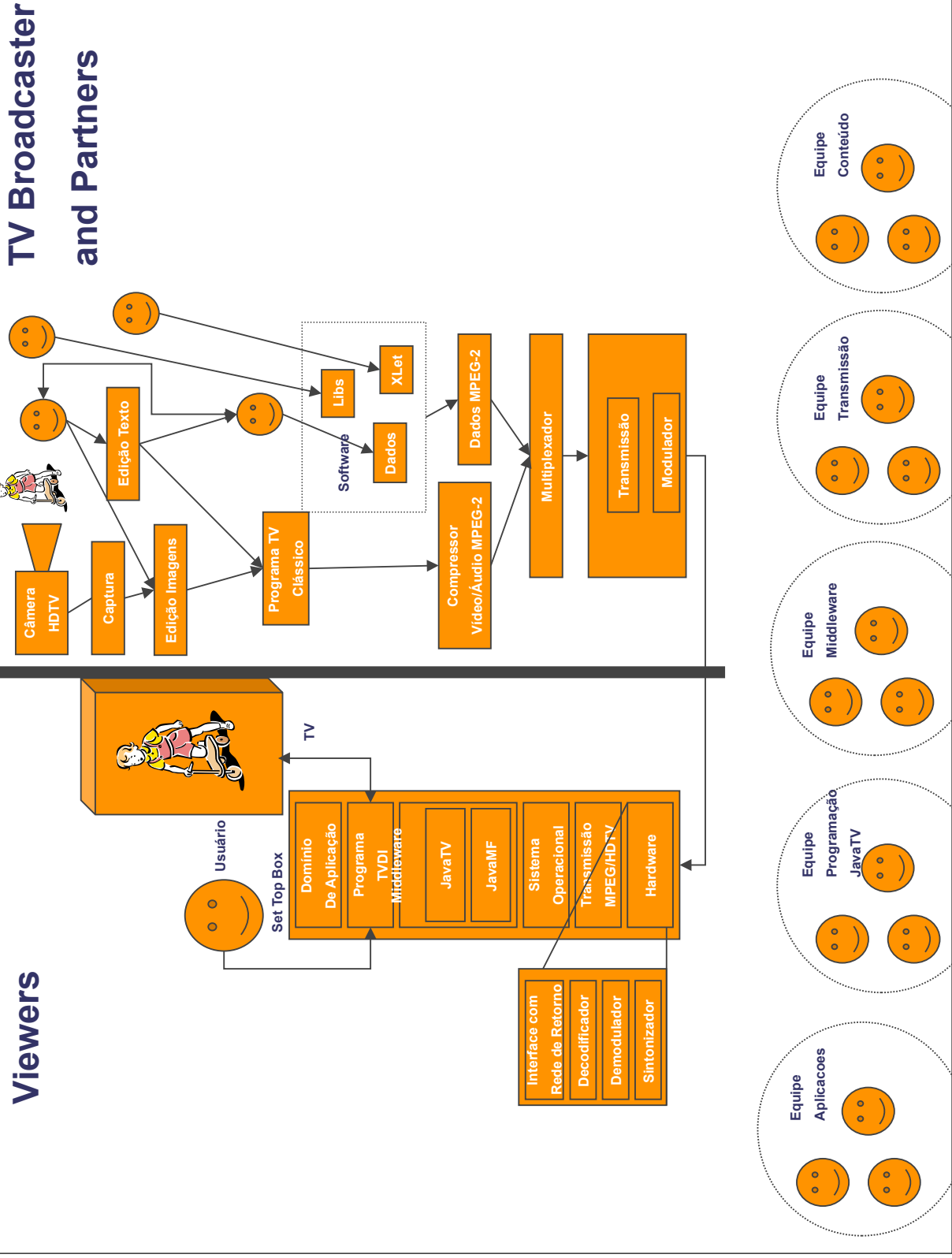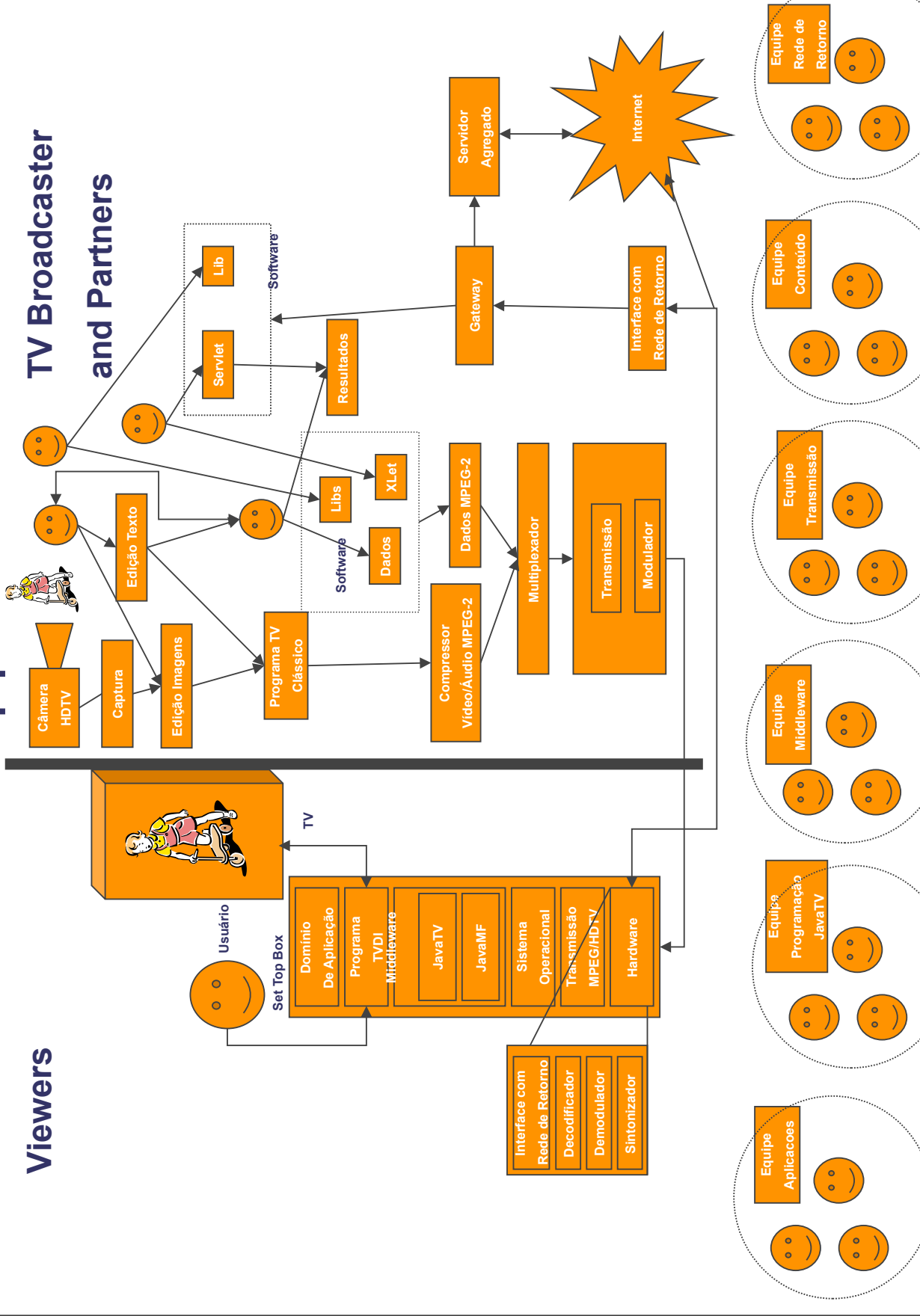- **Content personalization and recommendation**

Return

Billing challenges

Television cell
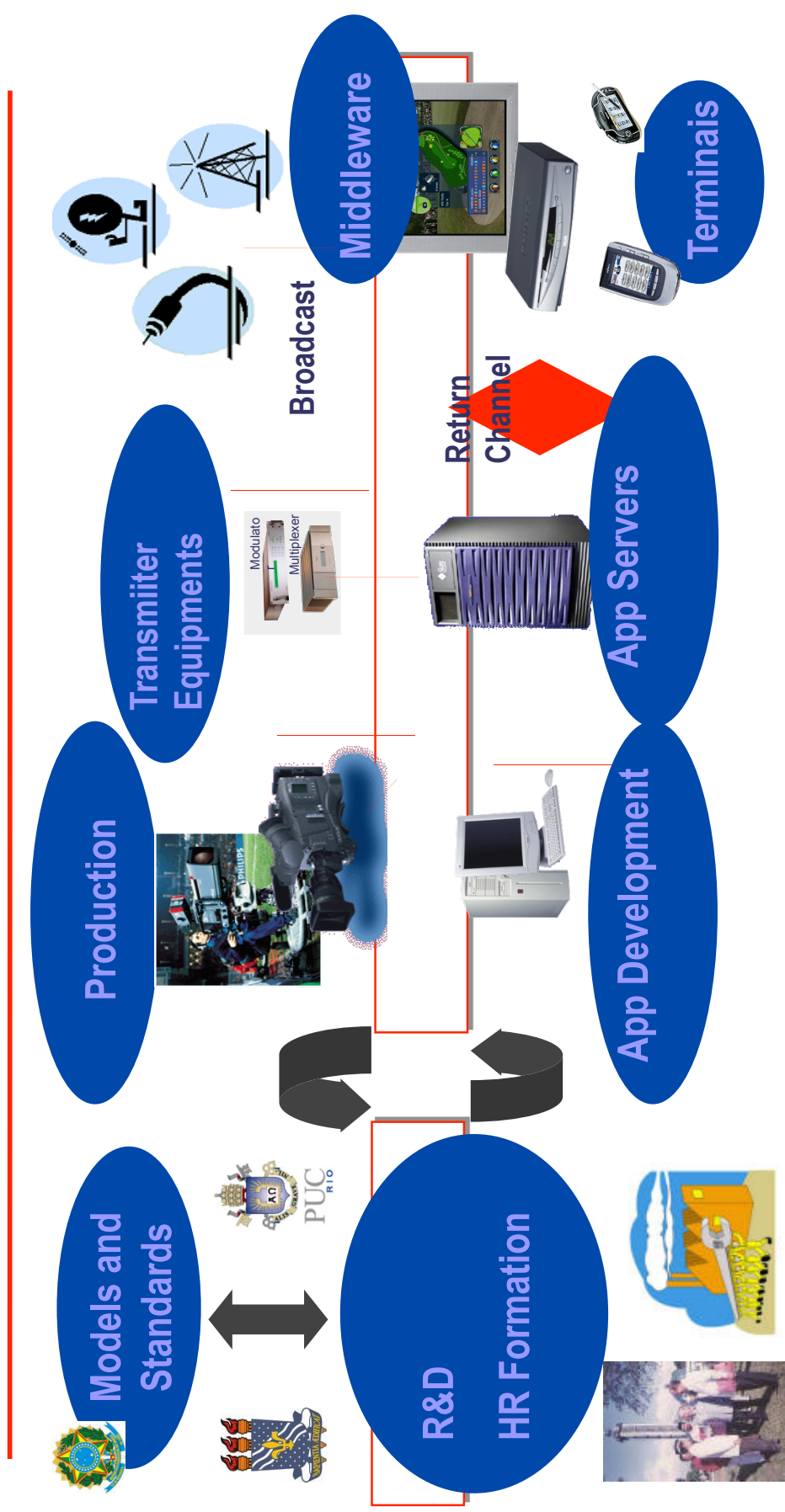
UMTS or GPRS cell

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Market Opportunities

Viewers

TV Broadcaster and Partners

Market Opportunities

Viewers

TV Broadcaster and Partners

Value Chain

Models and Standards — R&D / HR Formation — Production — Transmitter Equipments — Broadcast — Middleware — Terminais — App Servers — App Development — Return Channel

Technologies Reuse

Java Everywhere*

- 4.5 Billion Java-Enabled Devices
- 1.8 Billion Java-Enabled Phones
- 2.2 Billion Java Cards
- 20 Million Java TV Devices
- 800 Million Java Desktops
- 180 Operators Deploying Java Content
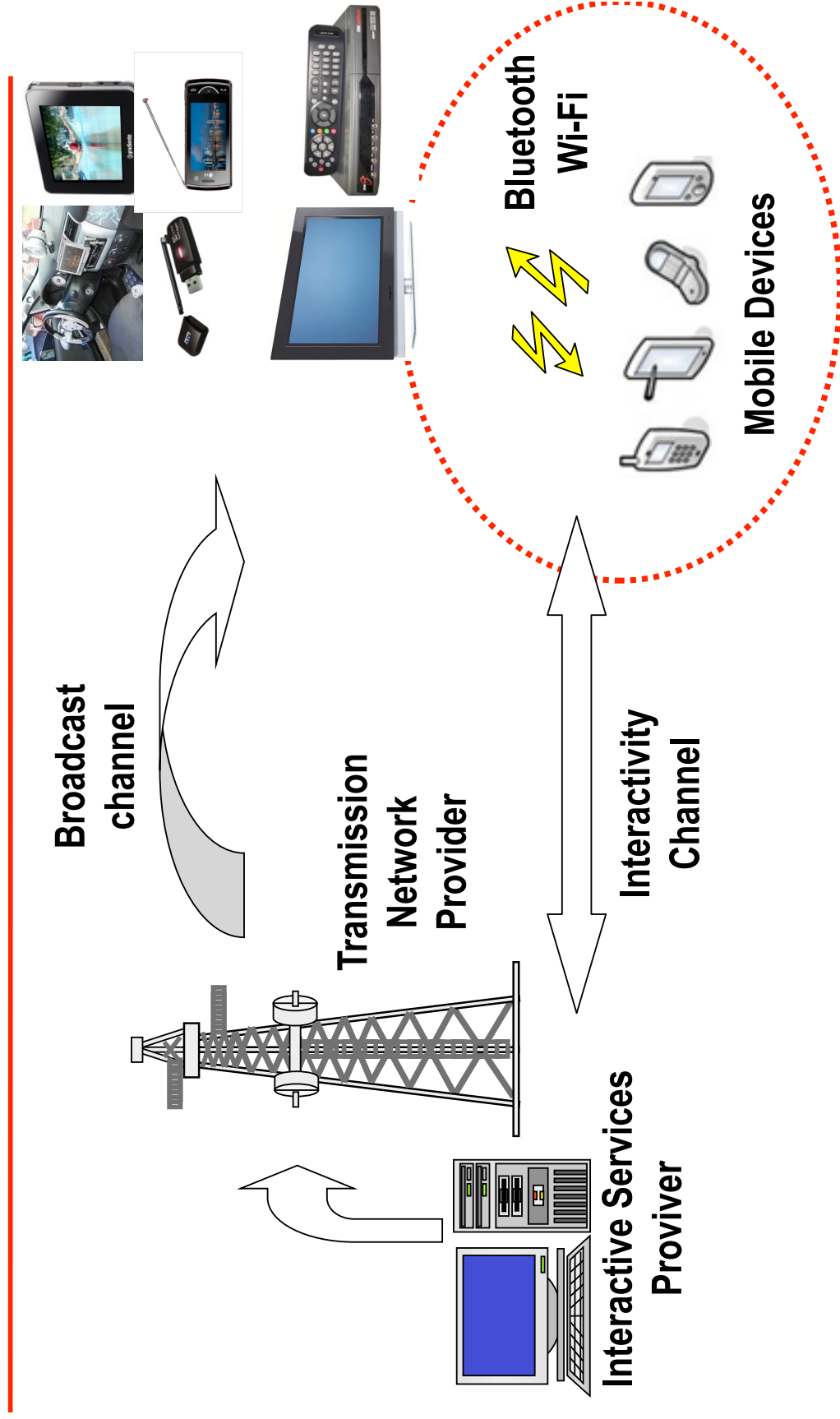- 6 Million Developers (110 Thousands in Brazil)

Source: Sun Microsystems, 2009

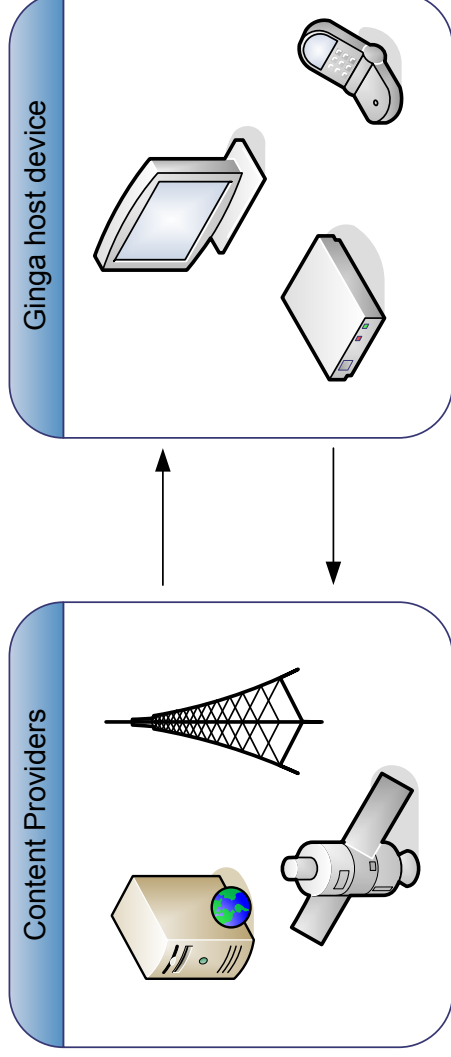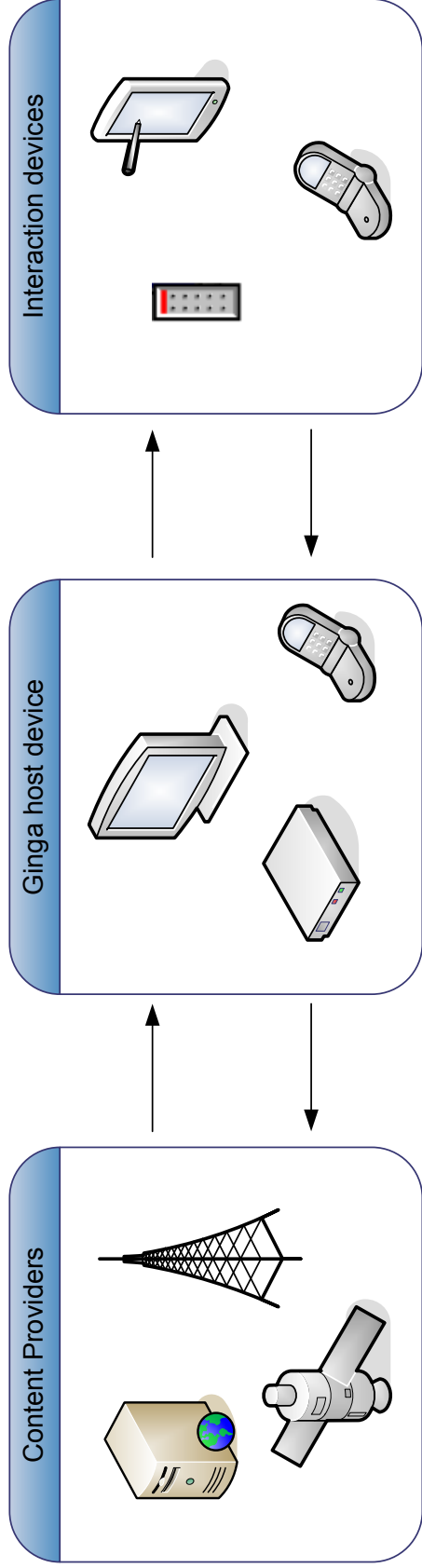# SBTVD – Innovations

Broadcast channel

Transmission Network Provider

Interactivity Channel

Bluetooth
Wi-Fi

Mobile Devices

Interactive Services Proviver

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Ginga Context

Content Providers

Ginga host device

Ginga Context Extended

Content Providers

Ginga host device

Interaction devices

Home Networking

Phase 3

The Networked Home
Data, voice and video delivery around the home

Phase 2

The Residential Gateway
Information distribution to multiple devices

Phase 1

Broadband Access
High speed Internet access

Functionality

Time

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Applications Examples

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Multi-devices and multi-user API

Virtual Cheering

Virtual Cheering

Virtual Cheering

Back-end
Server
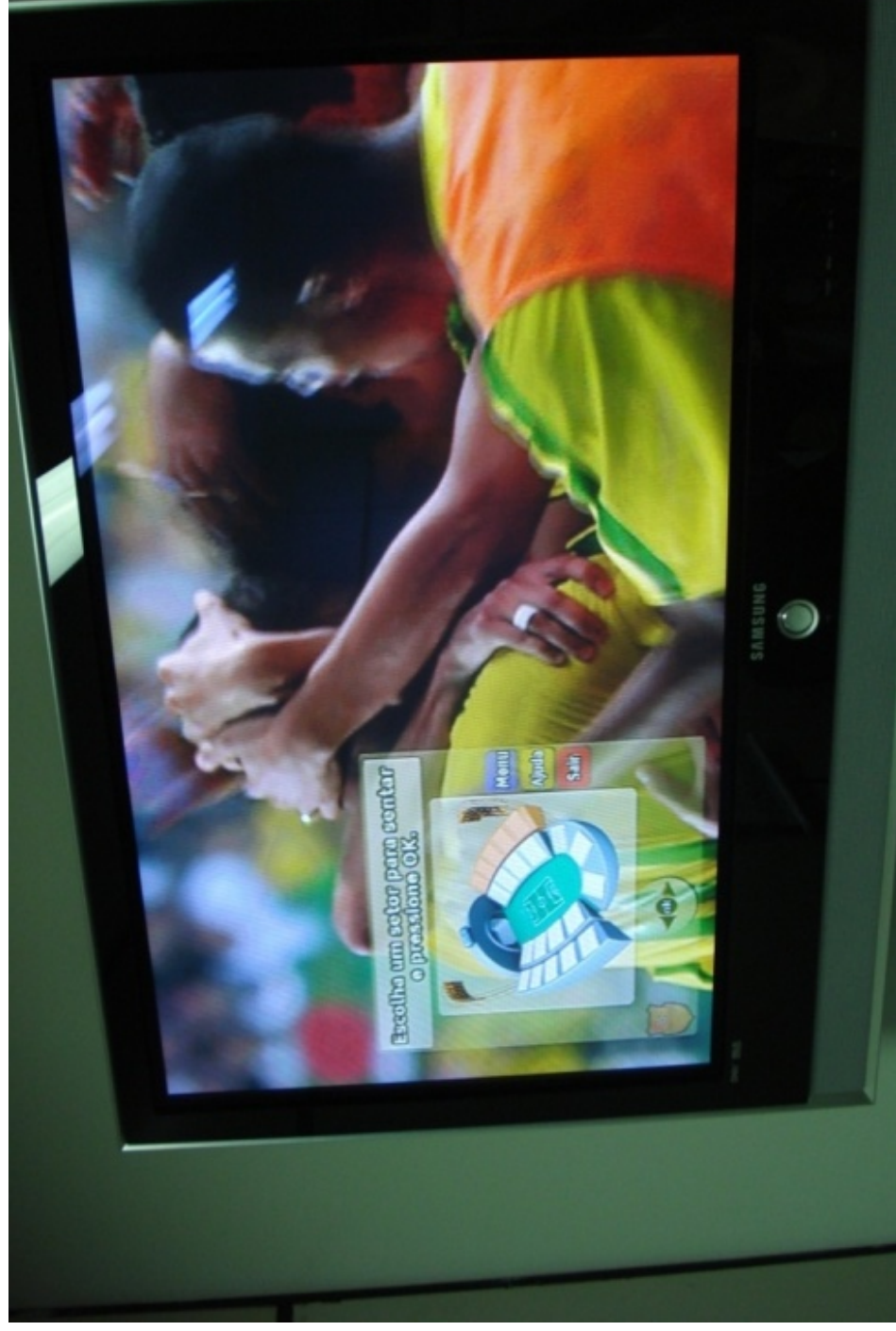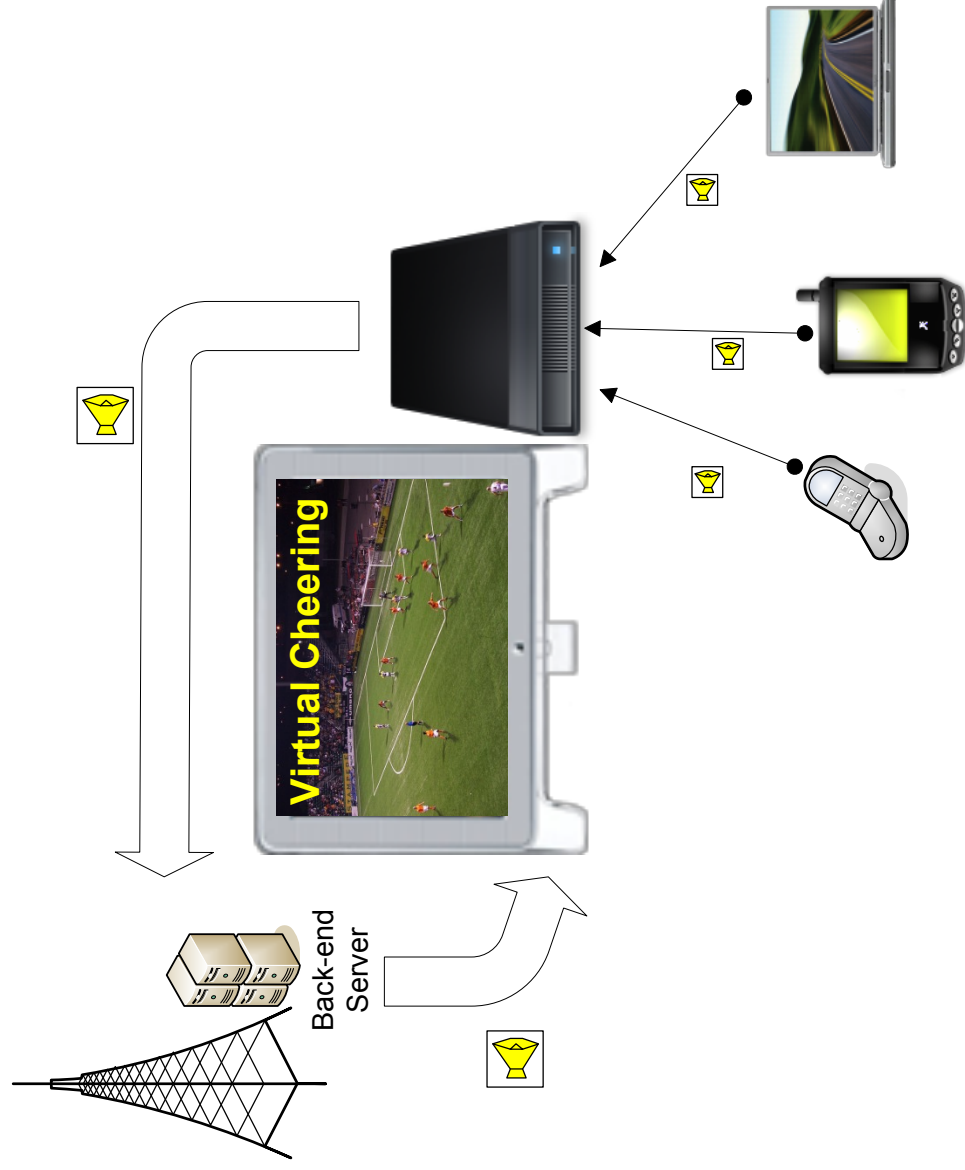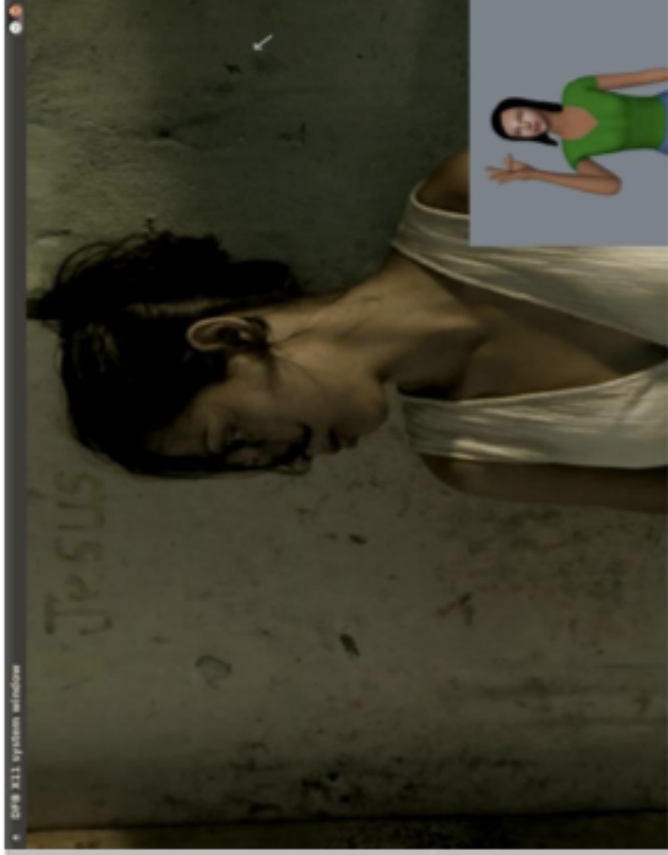
Sinal	Animação
amanhã	
estudar	
medicina	

GingaAppStore Project (Actual)

▲ Applications repository to SBTVD

Questions?
Thank You.

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