#### Internet e novas mídias

Maio/2015 - aula 3

#### Igor Macaúbas

igor@corp.globo.com igor@macaubas.com

#### Microsoft Research

Search Microsoft Research

Our research Connections Careers About us

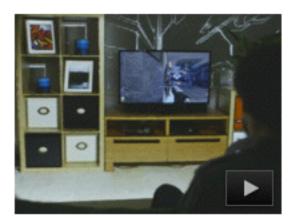
All Downloads Events Groups News People Projects Publications Videos

### IllumiRoom: Peripheral Projected Illusions for Interactive Experiences

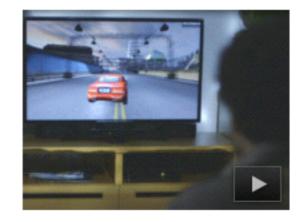


IllumiRoom is a proof-of-concept system from Microsoft Research. It augments the area surrounding a television screen with projected visualizations to enhance the traditional living room entertainment experience.

#### Videos



IllumiRoom: Peripheral Projected Illusions for...



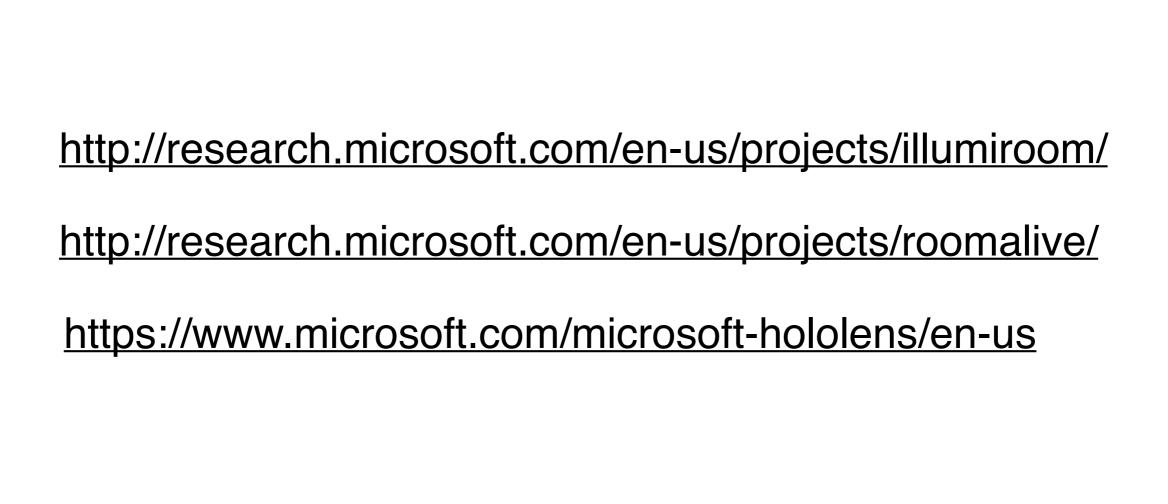
Read the CHI 2013 Best-Paper:

\*\*Control Control

\*\*Control

IllumiRoom: Peripheral Projected Illusions for Interactive Experiences (7.6 MB .pdf)

IllumiRoom uses a Kinect for Windows camera and a projector to blur the lines between on-screen



#### Vídeo na Internet

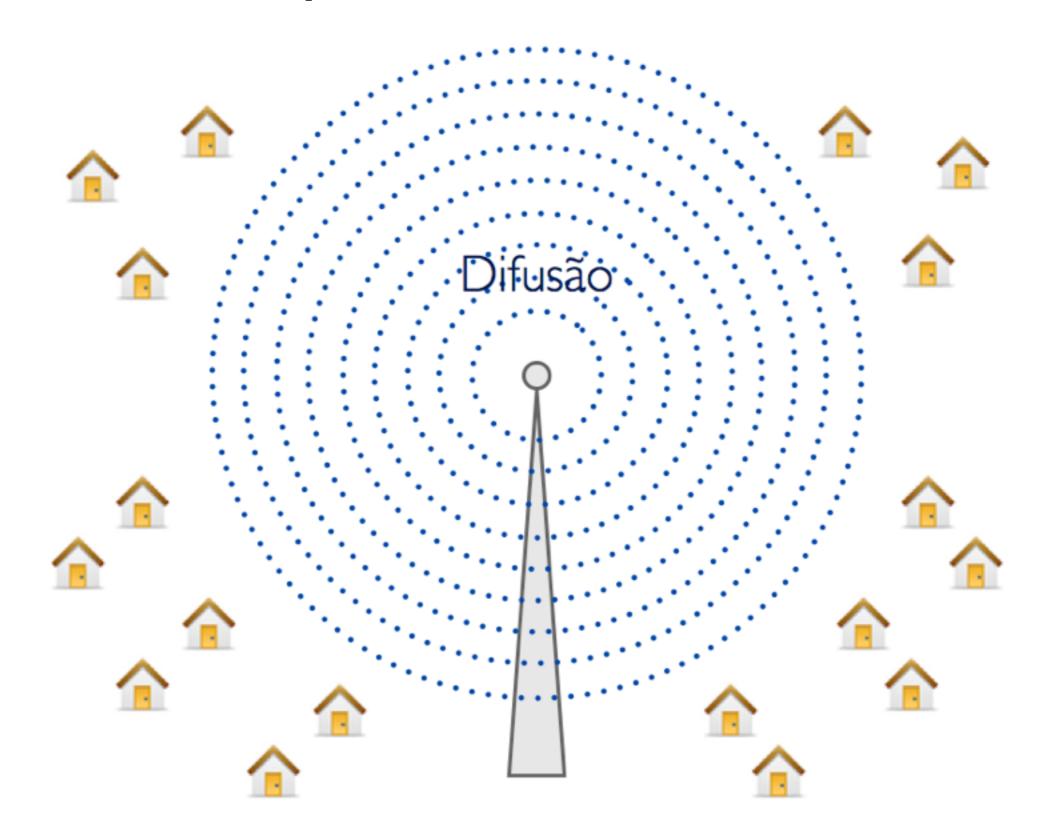
## Lncoding Distribuição Consumo

#### Encoding Distribuição Consumo

Codec Bitrate Framerate Resolução Aspect ratio Ao vivo VoD

Servidor de Vídeo Streaming Download progressivo Protocolo CDN DRM

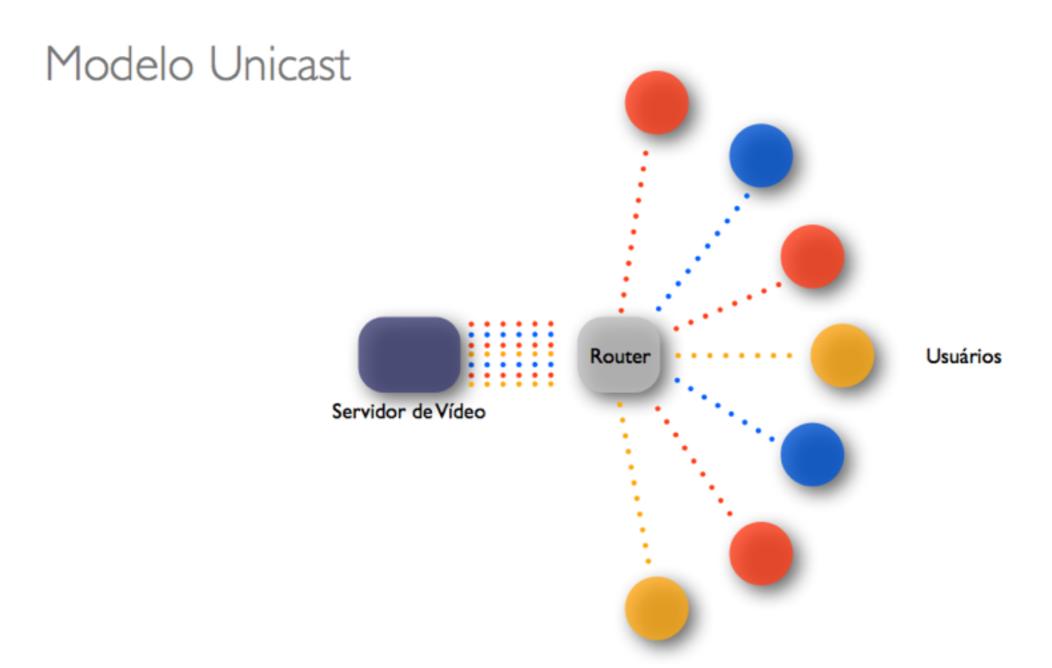
Player UX DVR Flash Silverlight HTML5 DRM



Unicast

Multicast

peer-2-peer



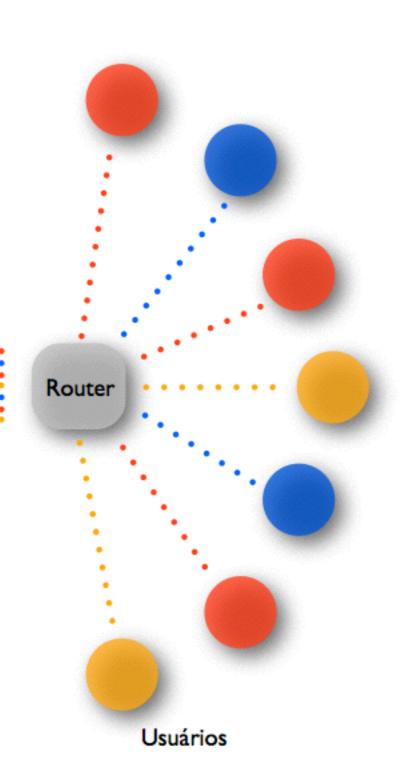
Modelo Unicast

 $500kbps \times 1400 = 700Mbps$ 

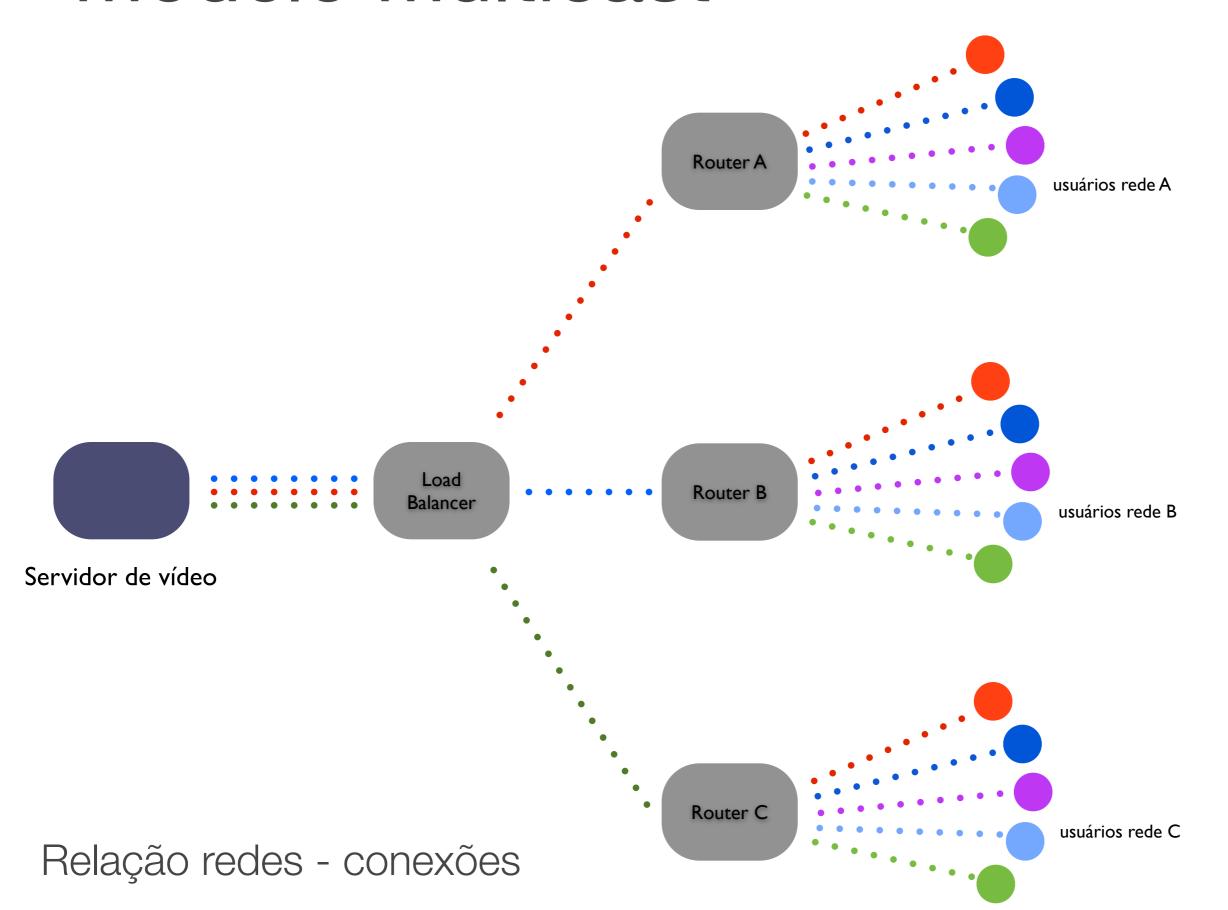
Servidor de Vídeo

#### **Bottlenecks:**

- Rede
- CPU
- Memória
- I.O.



#### Modelo Multicast



#### Modelo Multicast

#### Neutralidade de rede

#### Marco Civil: Neutralidade de rede é concorrência

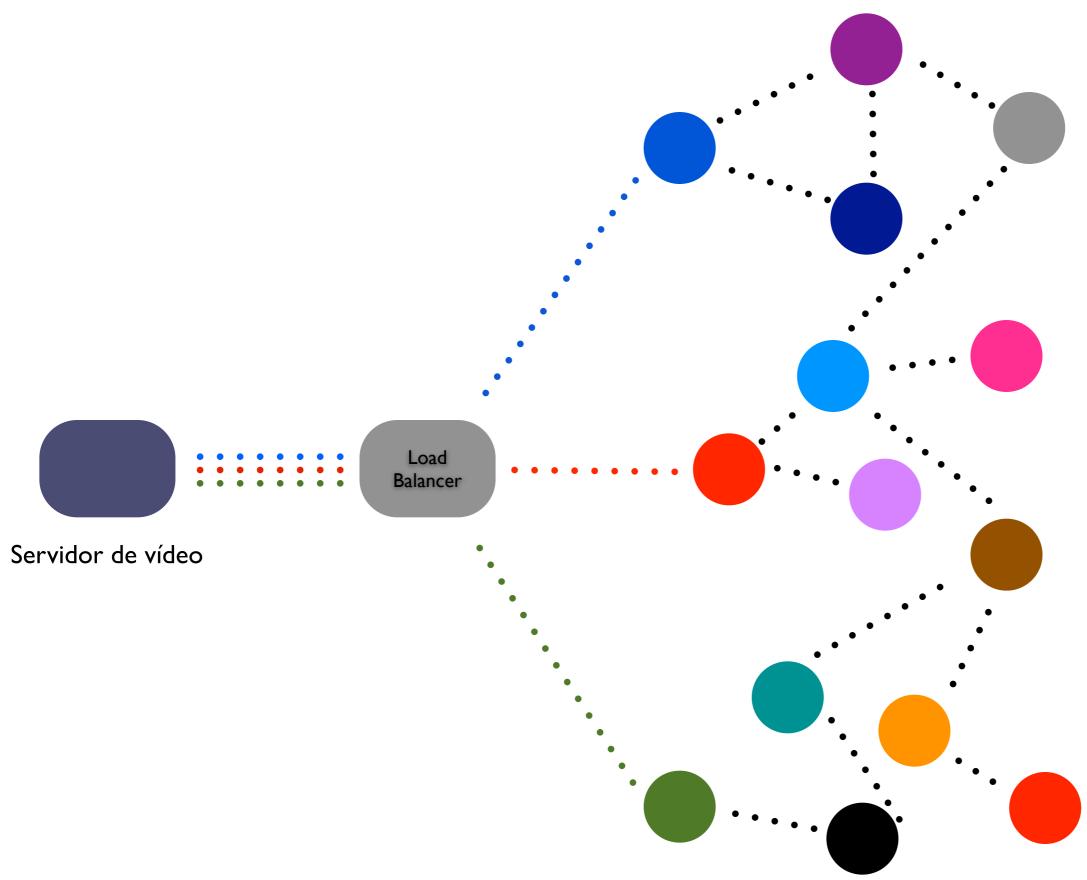
- :: Luís Osvaldo Grossmann :: Convergência Digital :: 17/04/2013
- Ponto central do Marco Civil, a neutralidade de rede é uma tentativa de garantir a competição na Internet, de forma a preservar o caráter de incentivo a ideias inovadoras. Com essa leitura, o ex-conselheiro do Conselho Administrativo de Defesa Econômica, Olavo Chinaglia, defendeu que esse princípio seja mantido como previsto na proposta que estacionou no Plenário da Câmara dos Deputados.

Unicast

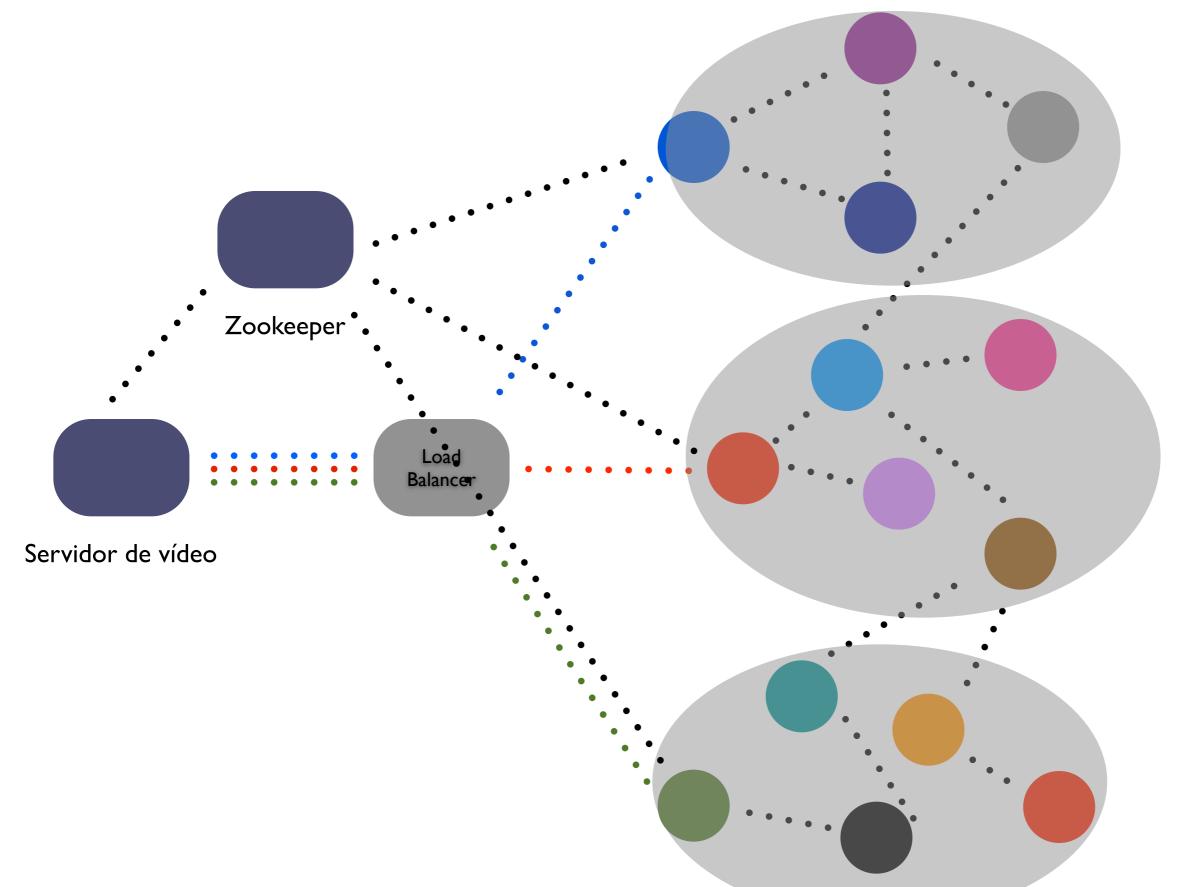


peer-2-peer

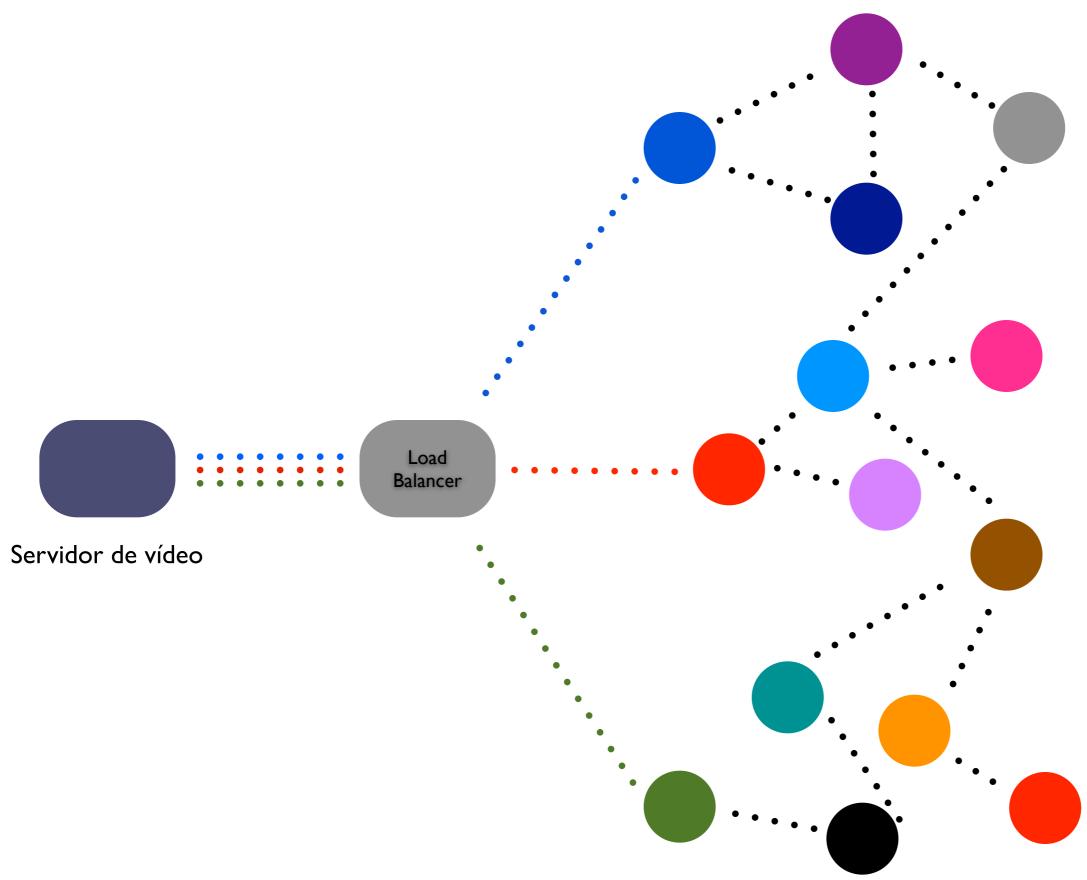
#### Modelo peer-2-peer



#### Modelo peer-2-peer



#### Modelo peer-2-peer

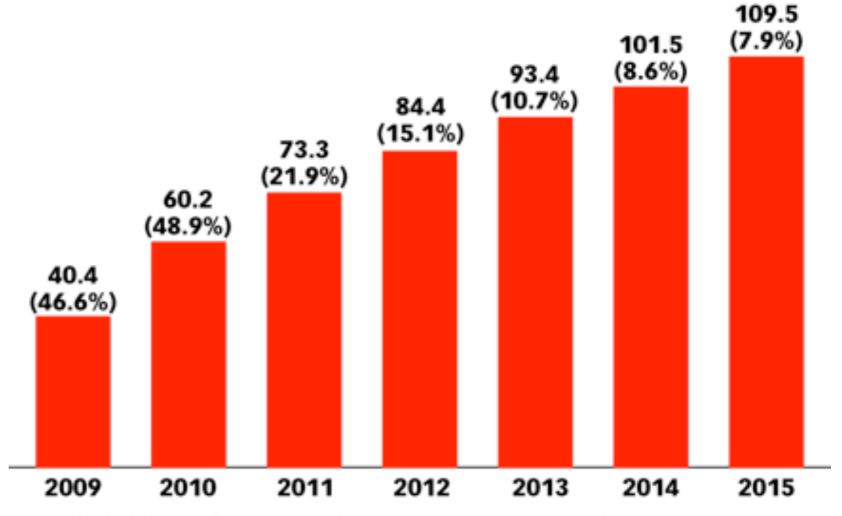


#### Mobile e convergência social

O uso de Smartphones continua impulsionando o mercado mobile dos EUA

#### **US Smartphone Users, 2009-2015**

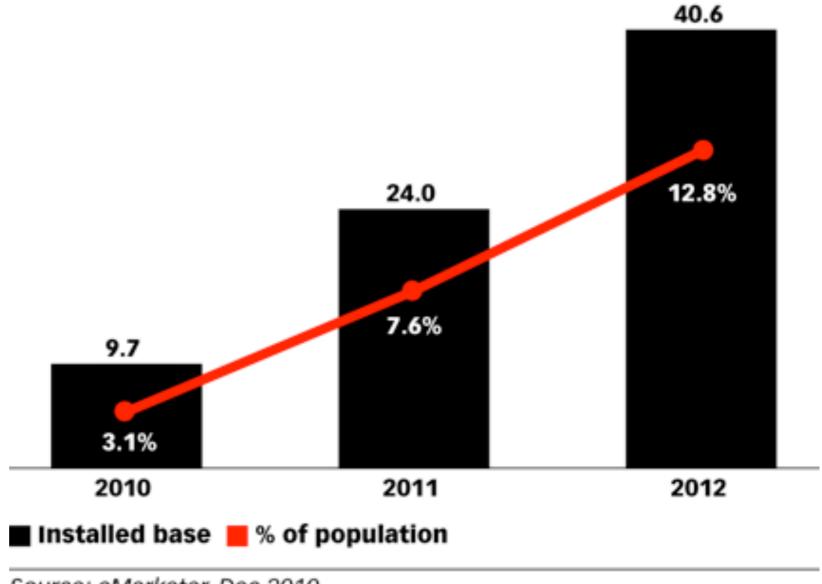
millions and % change



Note: individuals of any age who use a smartphone at least once per month Source: eMarketer, Dec 2010

#### O uso de tablets também continua a avançar

#### **US Tablet Installed Base, 2010-2012** millions and % of population

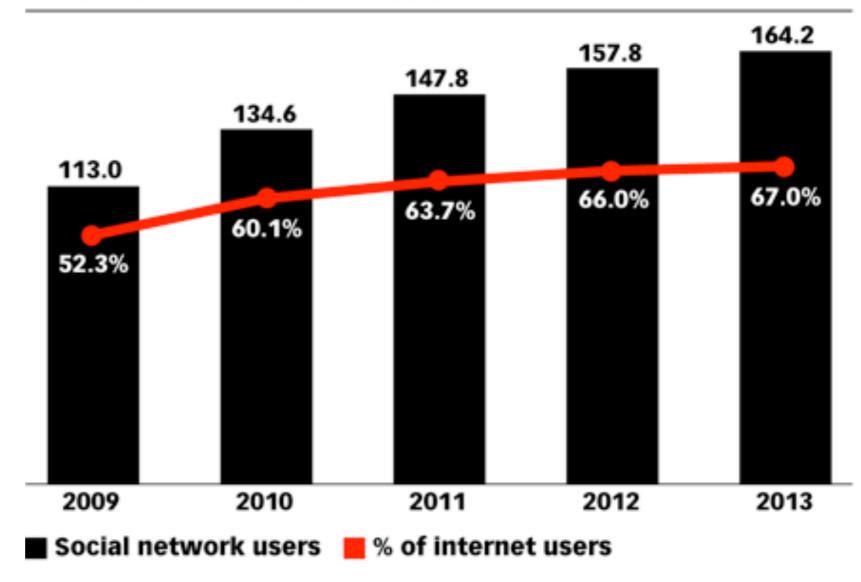


Source: eMarketer, Dec 2010

122243

O uso de redes sociais já é feito por quase a metade da população americana

#### US Social Network Users and Penetration, 2009-2013 millions and % of internet users



Note: internet users who use social networks via any device at least once per month

Source: eMarketer, Feb 2011

#### A maioria está concentrada em uma única rede social: Facebook

US Facebook Users and Penetration, 2009-2013						
	2009	2010	2011	2012	2013	
Facebook users (millions)	84.3	116.8	132.5	143.4	152.1	
—% change	90.3%	38.6%	13.4%	8.2%	6.1%	
—% of social network users	74.6%	86.8%	89.6%	90.9%	92.6%	
—% of internet users	39.0%	52.2%	57.1%	60.0%	62.0%	
—% of population	27.4%	37.6%	42.3%	45.3%	47.6%	

Note: CAGR (2009-2013)=10.3%; internet users who access their Facebook account via any device at least once per month

Source: eMarketer, Feb 2011

## Evolução da comunicação móvel

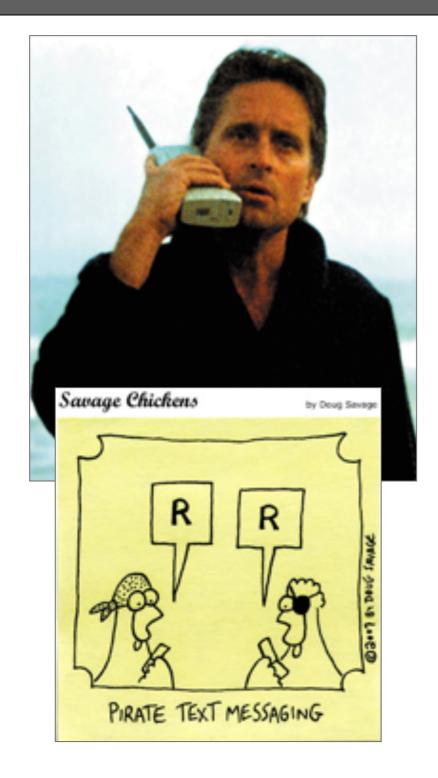




## "My sense is that mobile devices are inherently social...."

—Bret Taylor, CTO, Facebook, speaking at the Inside Social Apps conference, Jan 25, 2011

#### A comunicação também evoluiu





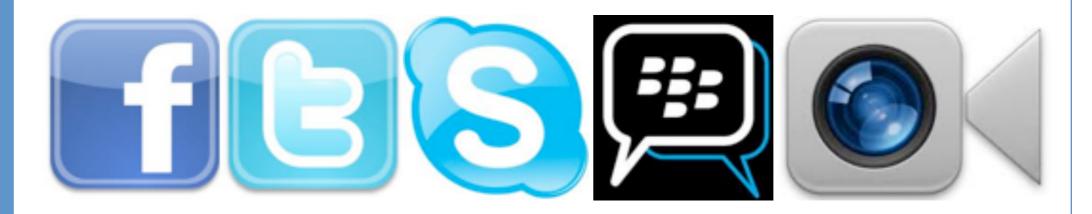


#### Bem vindos a post-phone era

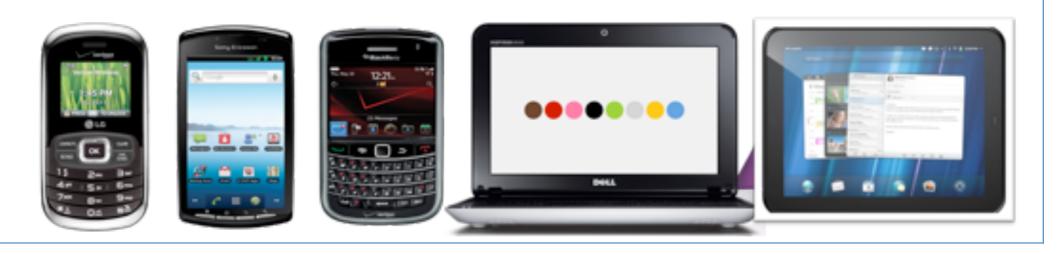
#### Activities

- SMS
- Instant messaging
- (Video) calling
- Social networking

#### Platforms



Devices



#### Mobile e web estão se tornando sinônimos...

#### Mobile Internet Traffic Worldwide, Mar 2010-Mar 2011

% of total Internet traffic

Mar 2010	1.82%		
Jun 2010	2.03%		
Sep 2010		2.81%	
Dec 2010			3.45%
Mar 2011			3.92%

Source: Net Applications report as cited in press release, April 1, 2011

#### ...a medida que o acesso à internet via dispositivos móveis expande

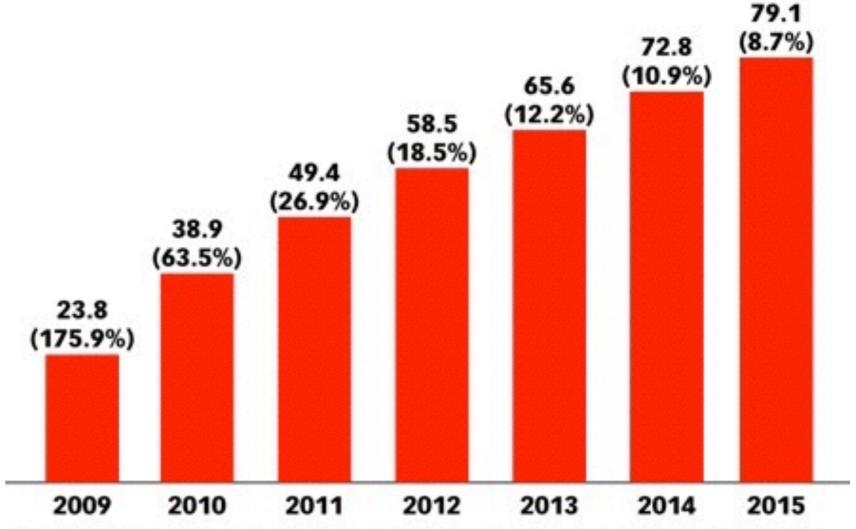
<b>US Mobile Int</b>	ernet	Users	and P	enetra	tion,	2009-2	015
	2009	2010	2011	2012	2013	2014	2015
Mobile internet users (millions)	62.6	77.8	91.4	104.4	115.1	125.5	135.2
—% change	30.7%	24.3%	17.5%	14.2%	10.2%	9.0%	7.7%
—% of mobile phone users	27.9%	33.6%	38.6%	43.3%	46.8%	50.1%	53.1%
—% of population	20.4%	25.1%	29.2%	33.0%	36.0%	38.9%	41.5%

Note: CAGR (2009-2015)=13.7%; mobile phone users of any age who access the internet from a mobile browser or an installed application at least once per month; excludes SMS, MMS and IM Source: eMarketer, Dec 2010

O uso de redes sociais em dispositivos móveis irá mais que dobrar entre 2010 e 2015

#### US Mobile Social Network Users, 2009-2015

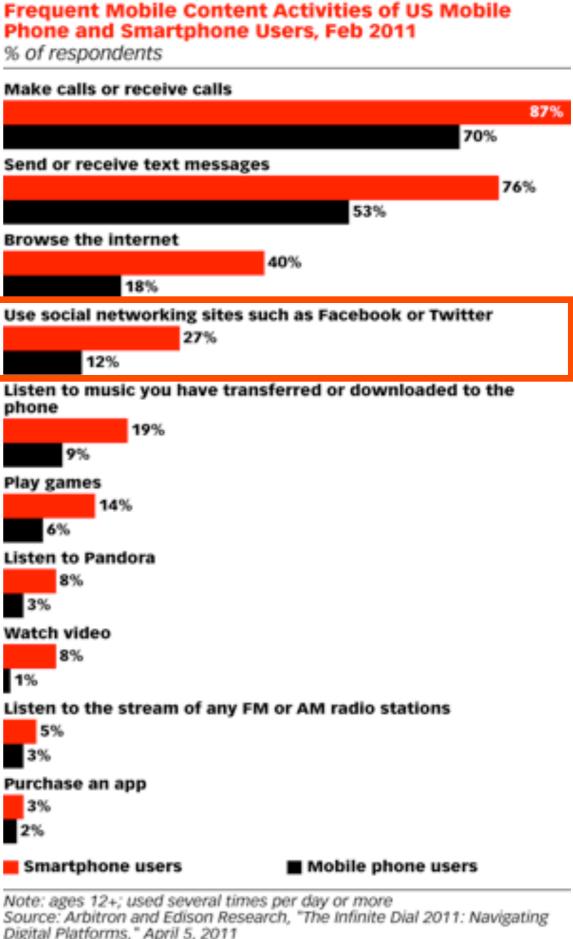
millions and % change



Note: mobile phone users who have a profile and access social networks from a mobile browser or an installed application at least once per month Source: eMarketer, Dec 2010

122263

#### Agora, as redes sociais são um core mobile activity

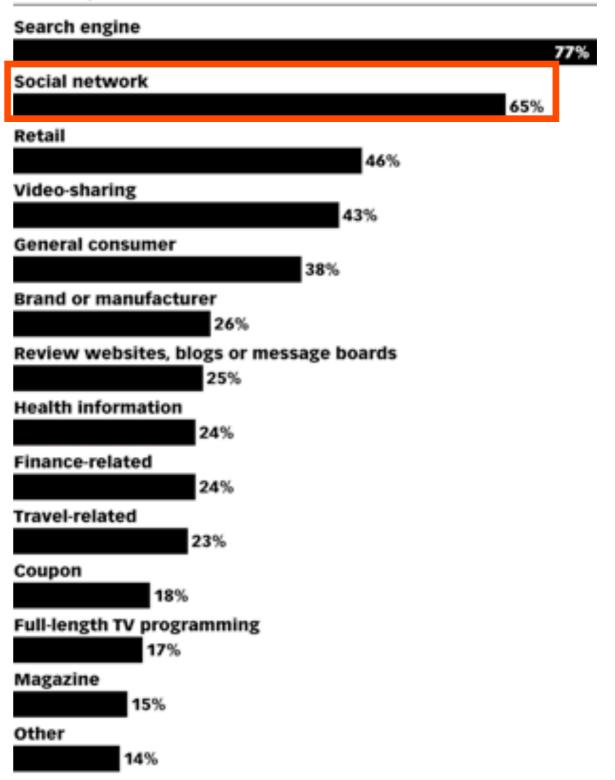


Digital Platforms," April 5, 2011

Usuários de smartphones preferem social sites

#### Types of Websites Visited via Smartphone According to US Smartphone Users, Q4 2010

% of respondents



Note: n=5,013 ages 18-64

Source: Google and Ipsos OTX MediaCT, "The Mobile Movement:

Understanding Smartphone Users," April 27, 2011

#### Telas maiores significam usuários mais satisfeitos



# Satisfaction\* with Select Mobile Content via Tablet vs. Smartphone, Dec 2010 % of US tablet or smartphone owners Internet 68% 42% Email 67% Social networking 60% 49% Tablet Note: read chart as saying 67% of tablet owners were very satisfied with email on their tablet while 59% of smartphone owners were very satisfied

with email on their smartphone; \*those saying they were "very satisfied" Source: The NPD Group, "Evolving Technology Trends" as cited in press

www.eMarketer.com

release, Feb 18, 2011

125354

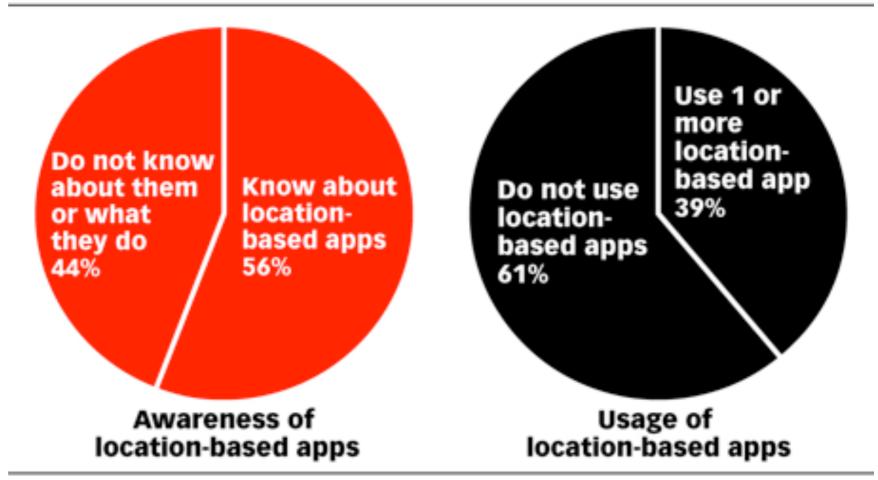
Image courtesy of The New Yorker

## Localização é mais que apenas um "check-in"

Location-based services surgem a cada dia

#### Awareness and Usage of Location-Based Apps Among US Smartphone Users, Feb 2011

% of respondents



Note: n=437 ages 14+

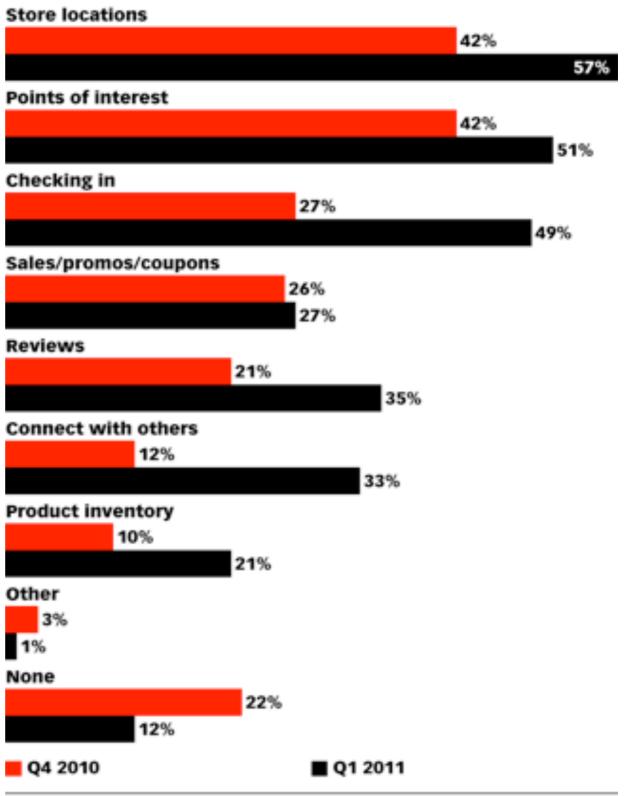
Source: White Horse, "Lost in Geolocation: Why Consumers Haven't Bought

It and How Marketers Can Fix It," April 13, 2011

Serviços locationspecific além do check-in estão crescendo

#### Location-Based Services that Are of Most Interest to Mobile Wi-Fi Users in North America, Q4 2010 & Q1 2011

% of respondents



Source: JiWire, "Mobile Audience Insights Report: Q1 2011," May 24, 2011

128131

Porém seu uso está mais desenvolvido apenas nos EUA...

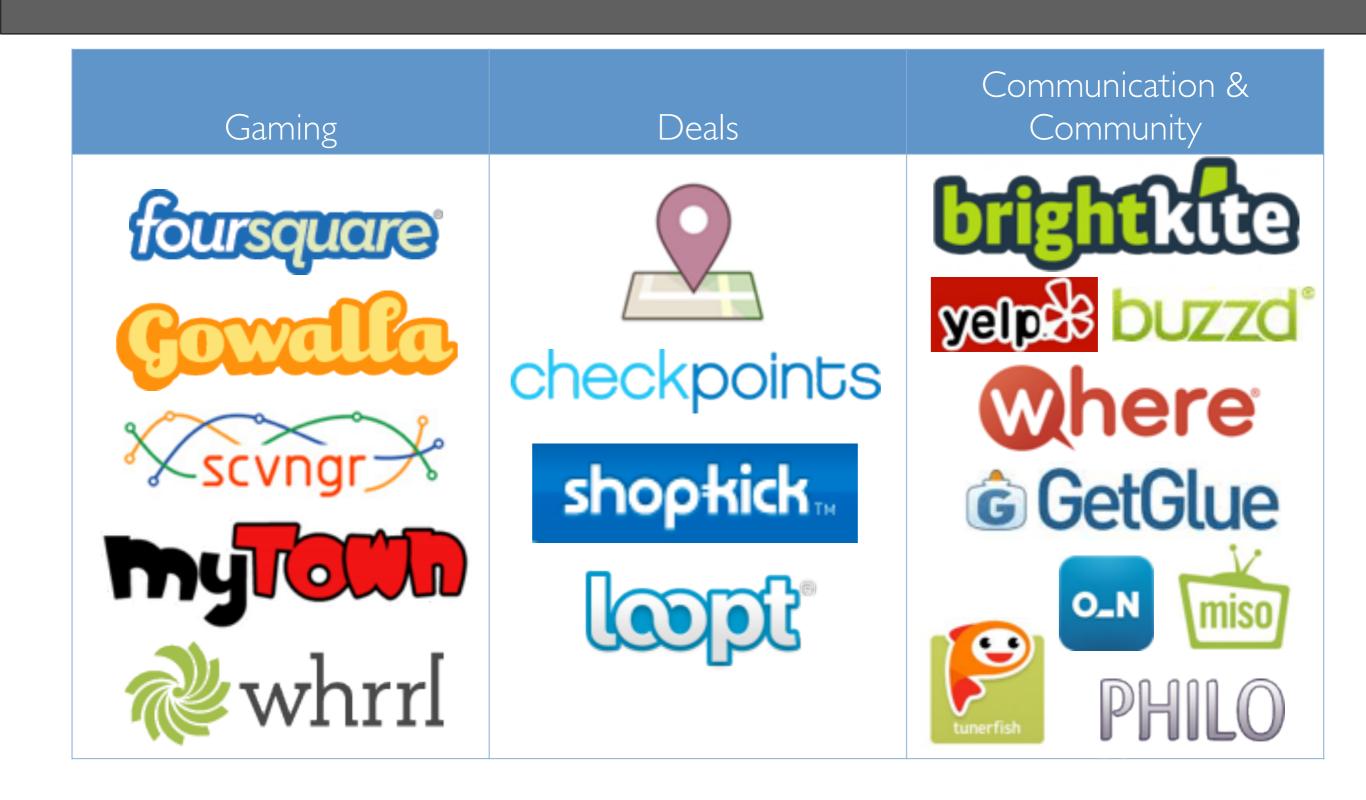


% of total

US (n=150) 10% 25%	19% 23%	<b>22% 1%</b> →			
UK (n=129)	2010	2270 770			
<b>6%</b> 17% 18%	32%	27%			
Canada (n=178)					
<b>-</b> 3% <b>-</b> 7% 15%	30%	<b>44% 1%</b> →			
Germany (n=142)					
<b>-</b> 2% 17% 21%	31%	28% 1%-			
Japan (n=172)					
<b>-2</b> % 16% 24%	% 27%	30% 1%-			
Total (n=771)					
<b>5% 16% 19%</b>	29%	31% 1%⊸			
■ Every day ■ About once or twice per month ■ Several times a week ■ Less than once a month ■ About once a week ■ Never					

Note: numbers may not add up to 100% due to rounding Source: Microsoft, "Location Based Services Usage & Perceptions Survey" conducted by Cross-Tab Marketing Services, Jan 26, 2011

### Geolocation apps podem ser classificadas em nichos



Fazer um Check-in é motivado pela troca de valores: obter informações importantes e encontrar ofertas

#### Reasons for Using Geolocation Apps, June 2010 % of UK & US mobile internet device owners Get informed 70.3% 64.6% Meet up with friends 41.2% 43.2% 42.5% Meet new people 12.6% 14.8% 13.9% Competition (e.g., for badges, location "mayor") 8.8% 8.6% 8.7% UK (n=454) ■ US (n=752) Total (n=1,206) Source: Webroot survey conducted by e-Rewards, July 13, 2010 118111 www.eMarketer.com Most Valuable Aspect of "Checking In" to a Location via a Mobile App, Sep 2010 % of US mobile Wi-Fi users **Deals and promotions** 29% Sharing my location 17% 14% Association with cool places Scoring points Don't check in 51% Source: JiWire, "Mobile Audience Insights Report: Q3 2010," Nov 17, 2010 122103 www.eMarketer.com

#### O foco está mudando do check-in...



























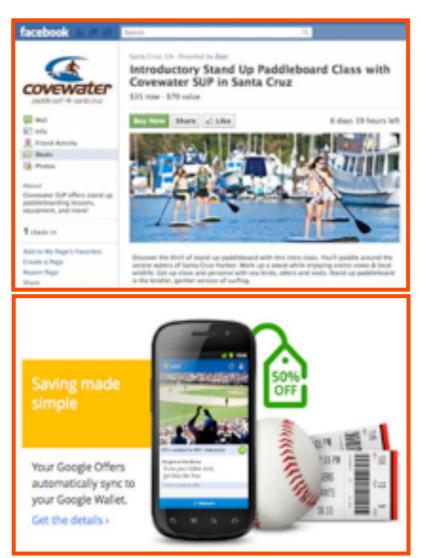






### ...para o checkout









- Fitas VHS / Betamax
  - Legalmente permitido por um processo entre Universal Studios vs Sony



- Em 1997 surge a TiVO Inc.
- Criou o mercado de PVR (Personal Video Recorder) ou DVR (Digital video Recorder)
- EPG (Electronic Programming Guide) Integrado
- Extremamente fácil de usar

#### Tecnologia:

- Linux
- 2 DSP (I p/ encoding, I p/ decoding)
- Tivo FileSystem



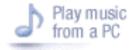


#### Expansão de funcionalidades:

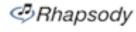
- Download de conteúdo TiVoCast
- Serviços Online
- TiVo To Go (DRM)



#### Listen to music on your TiVo DVR



Share you personal PC or Mac music library through your TV



Find and listen to millions of song titles on the Rhapsody music service



<u>Live365</u> is the Internet's largest radio network, playing oldies to goodies



Find and listen to thought-provoking and entertaining podcasts



Download your favorite music videos with Music Choice — for FREE

#### Experience photos on your TiVo DVR



View your <u>PC or Mac photo albums</u> and slideshows on your TV



View family and friends' photos from Photobucket



Share your story in pictures with Picasa Web Albums

#### No Brasil:

- Net HD MAX
- SKY+





## Place shifting

# Place Shifting

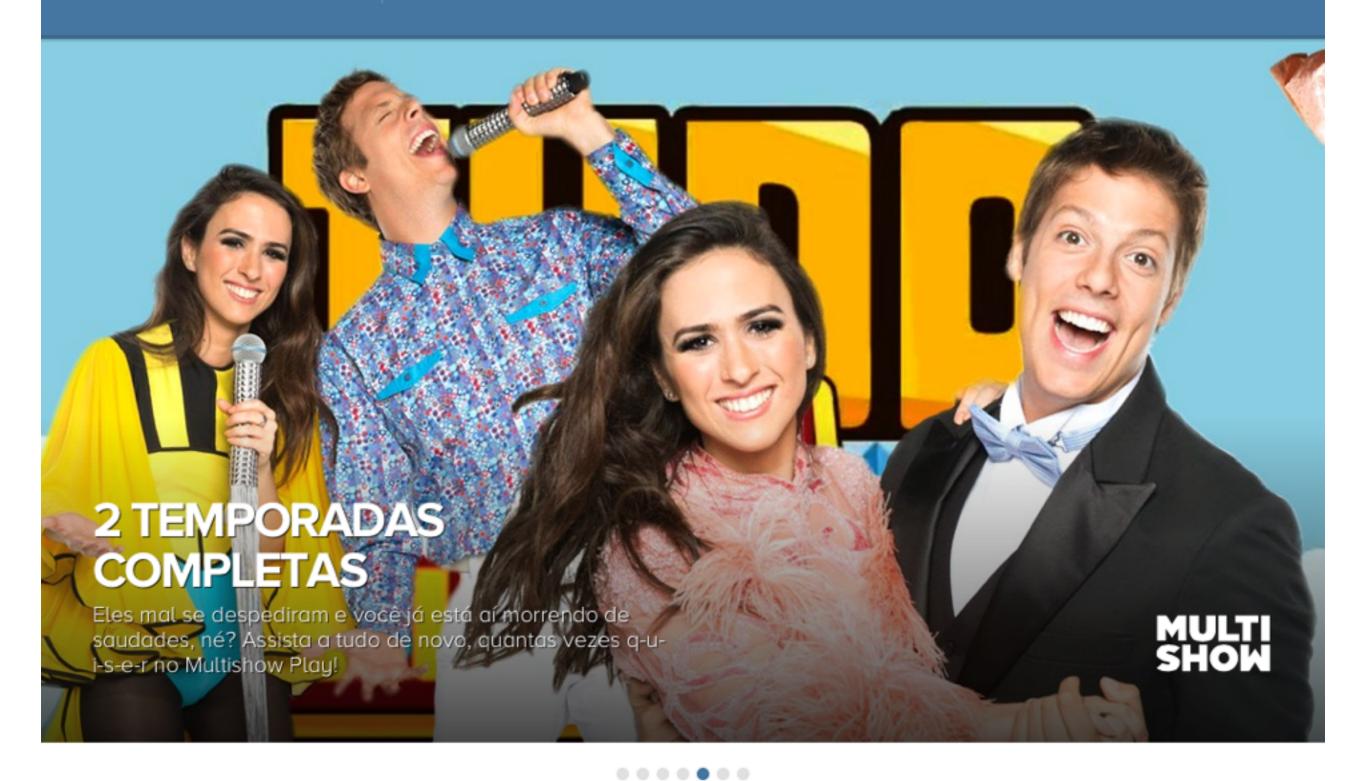




CANAIS ON DEMAND .

CANAIS AO VIVO V

CONHEÇA



#### QUEM PODE ASSISTIR?

### O Globosat Play é **gratuito** e **exclusivo** para os assinantes das operadoras abaixo:



















\* CONSULTE AS OPERADORAS ATUALMENTE DISPONÍVEIS PARA ASSINANTES COMBATE, PREMIERE E TELECINE.

#### COMO FAÇO PARA USAR?



#### CADASTRE-SE

Crie agora seu cadastro no site da sua operadora de TV por assinatura. É bem simples! Você só precisa deste login para começar a assistir... **Veja nosso passo a passo** 



#### **ENTRE AGORA**

Já possui login e senha da sua operadora de TV? Então é só entrar e aproveitar!





AJUDA ~



ENTRAR





Não há transmissões ao vivo no momento. Confira os horários e acompanhe os próximos jogos.



#### UFC: EDGAR X FABER

Assista à luta entre Frankie Edgar e Urijah Faber, pela categoria dos penas do UFC.

#### UFC: HUNT X MIOCIC

Stipe Miocic aplica um verdadeiro massacre e nocauteia Mark Hunt. Reveja!

#### BOXE INTERNACIONAL -MAYWEATHER X PACQUIAO

Reveja a luta do século no boxe, entre Floyd Mayweather e Manny Pacquiao - valendo a unificação dos cinturões meio médios!

#### **EVENTOS ANTERIORES**



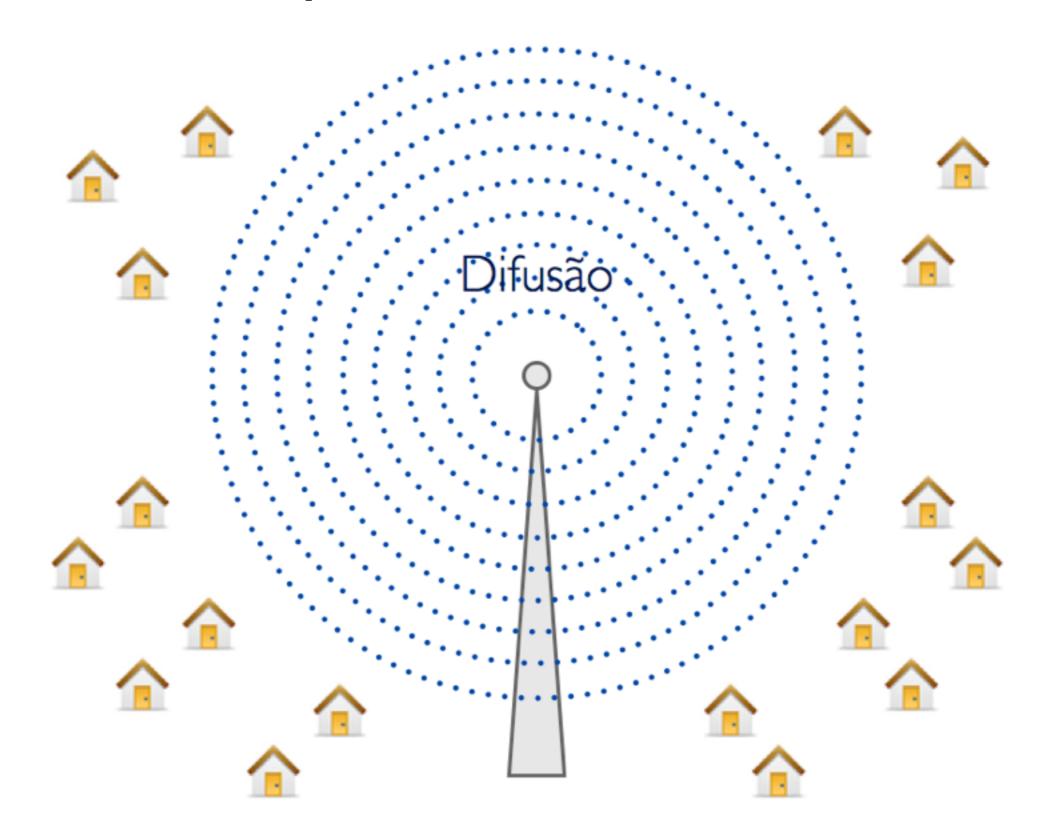
#### UFC: EDGAR X FABER EDGAR VS FABER

Luta entre Frankie Edgar (US) x Urijah Faber (US), válida pelo UFC Edgar x Faber - Peso Pena, em 16/05/2015.

#### VEM AÍ



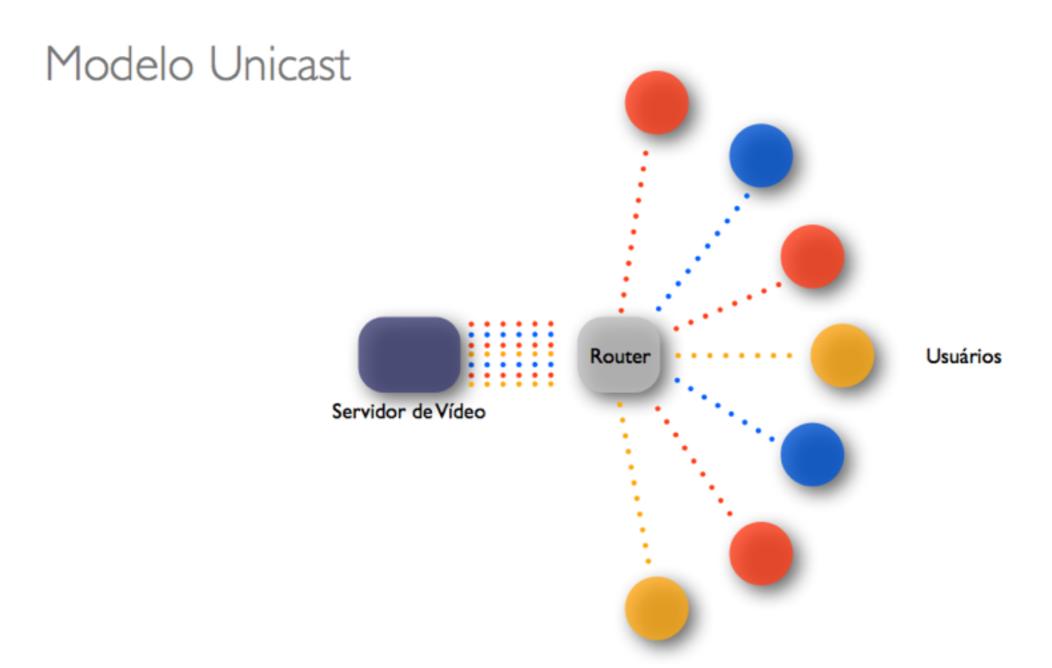
# Vídeo na Internet Delivery - escala



Unicast

Multicast

peer-2-peer



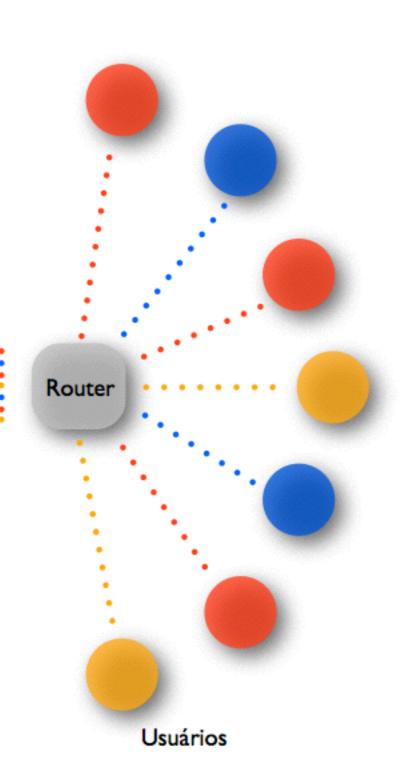
Modelo Unicast

 $500kbps \times 1400 = 700Mbps$ 

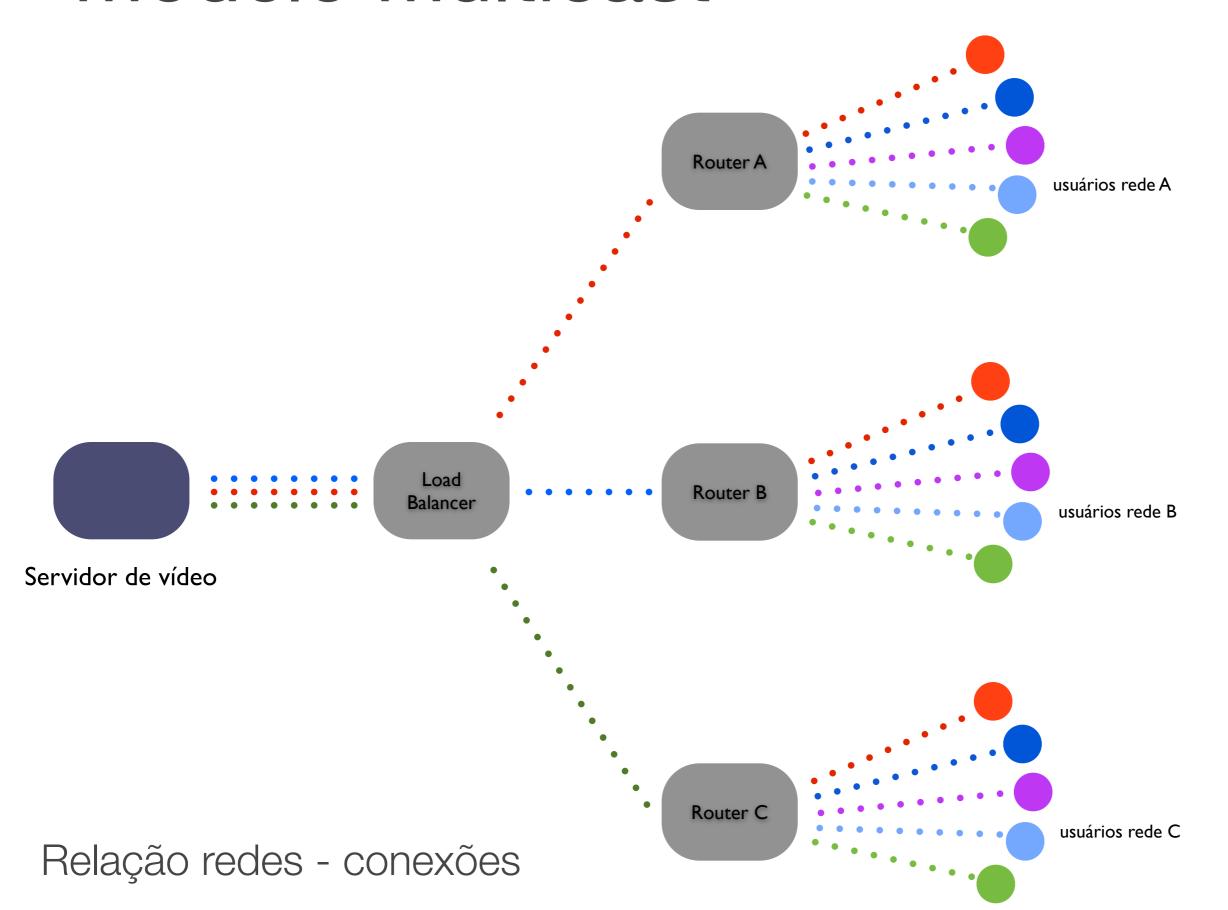
Servidor de Vídeo

#### **Bottlenecks:**

- Rede
- CPU
- Memória
- I.O.



### Modelo Multicast



### Modelo Multicast

### Neutralidade de rede

#### Marco Civil: Neutralidade de rede é concorrência

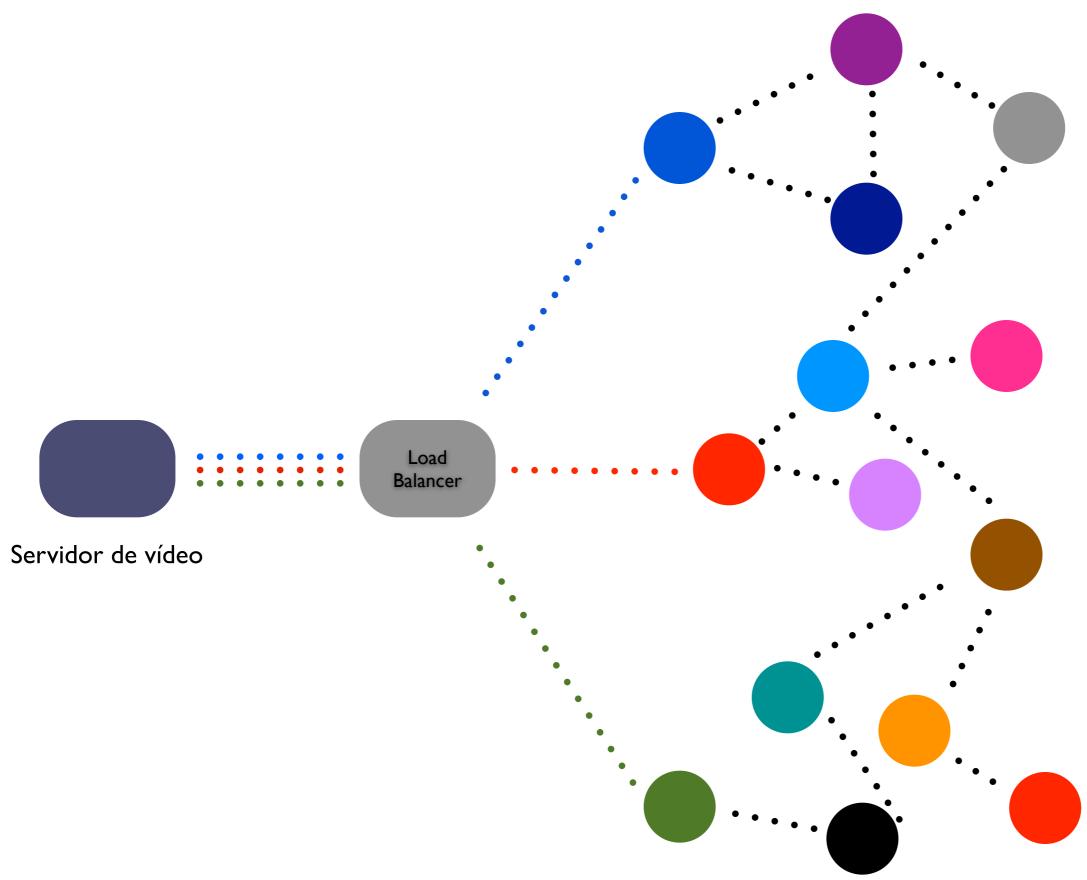
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Unicast

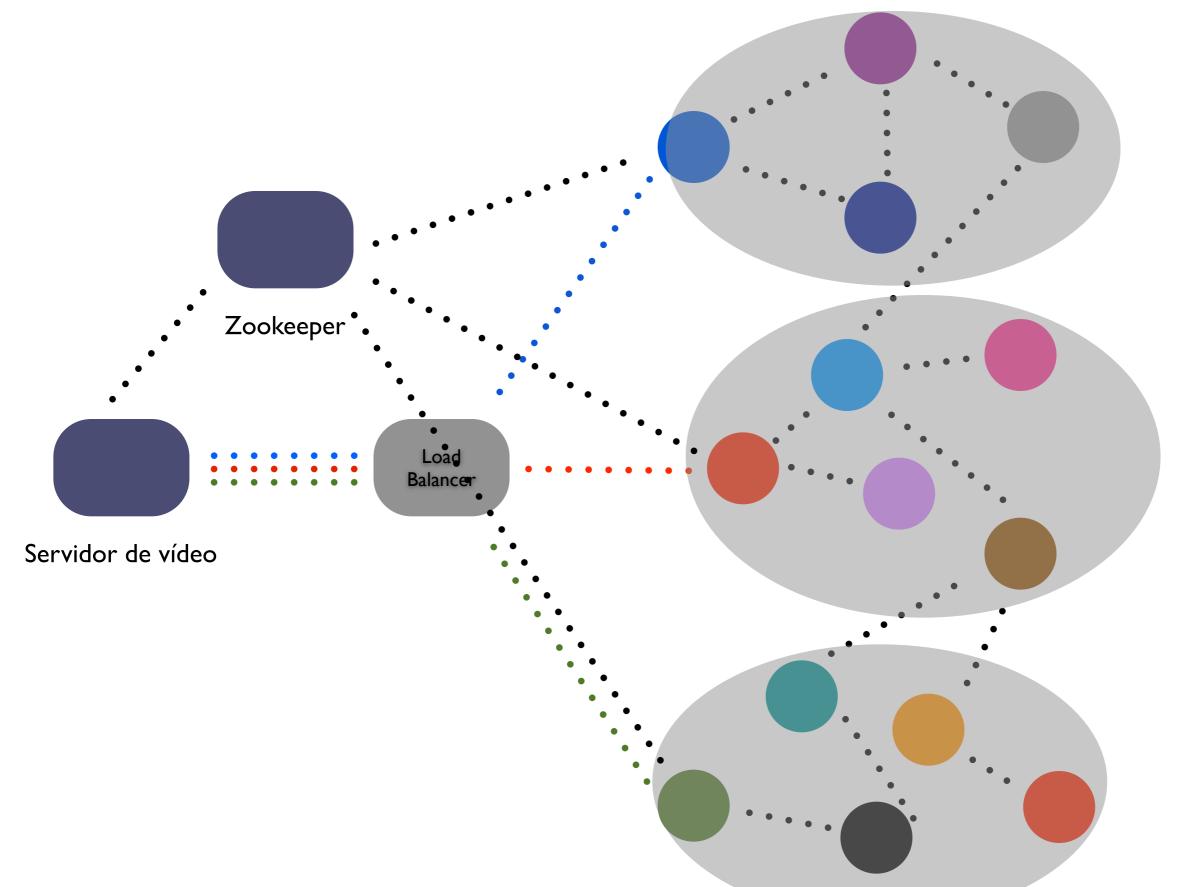


peer-2-peer

### Modelo peer-2-peer



### Modelo peer-2-peer



#### NETFLIX







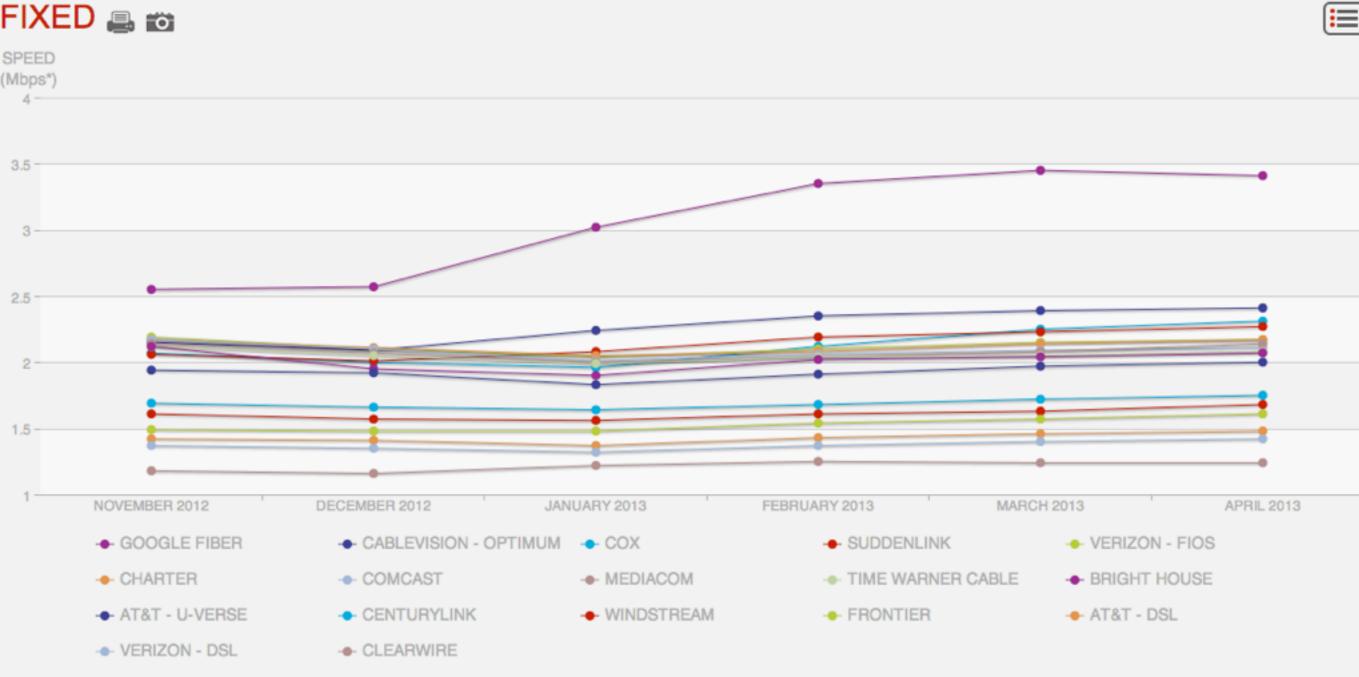






http://ispspeedindex.netflix.com/

#### SELECT DATES

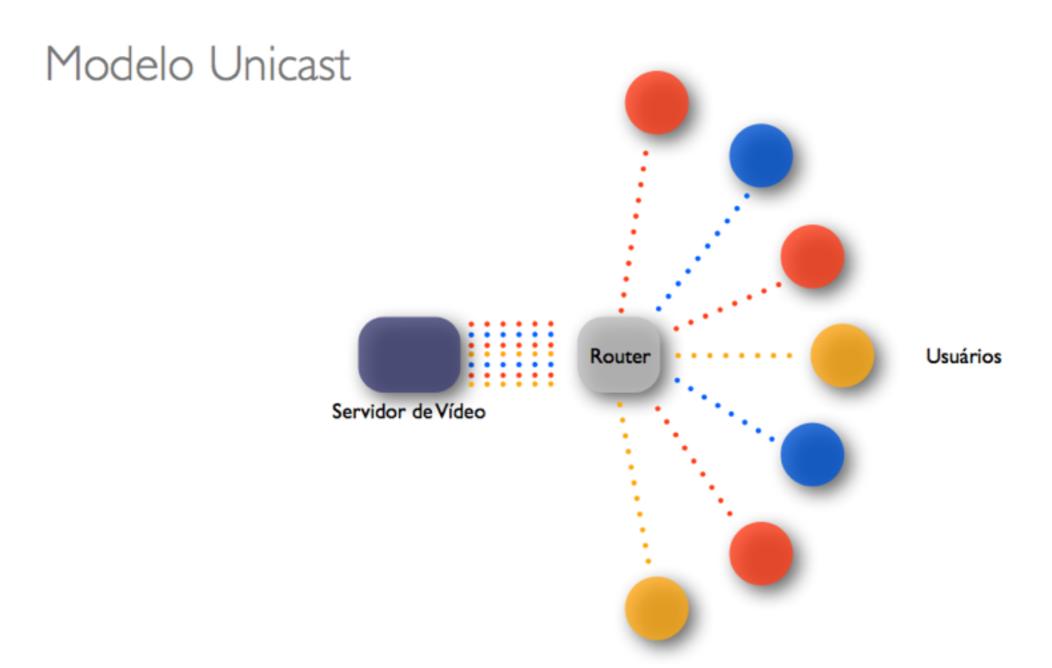




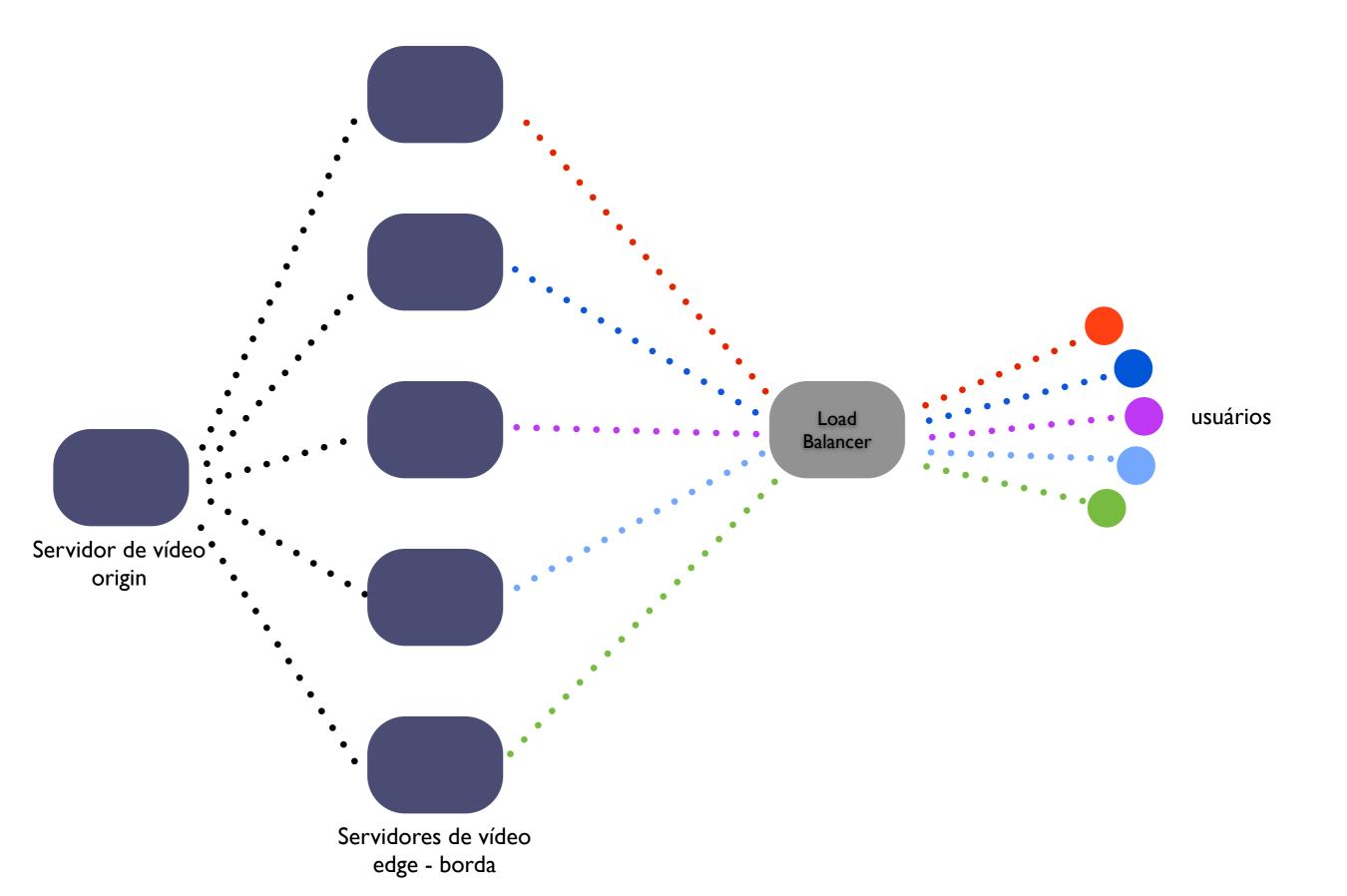
Unicast

West SIST

per 2 peer



### Modelo Unicast - escala



Igor Macaúbas igor@macaubas.com