



FROM SWITCHING TO MATCHING: A VIEW ON THE DEVELOPMENT OF IXPs

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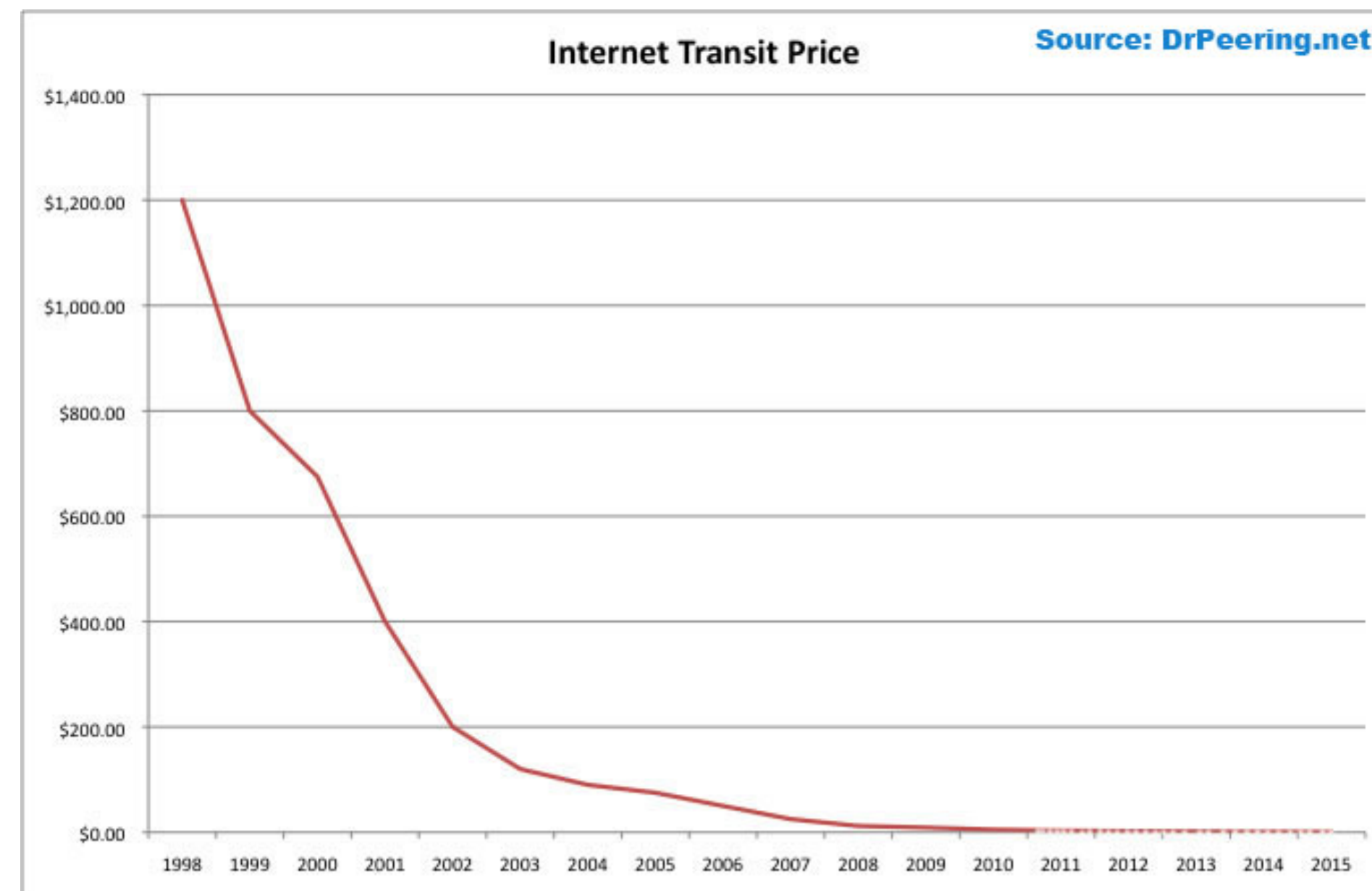
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INTRO

Since quite a while, connecting to an IXP is not about saving on transit.



And yet IXPs see no decline in popularity

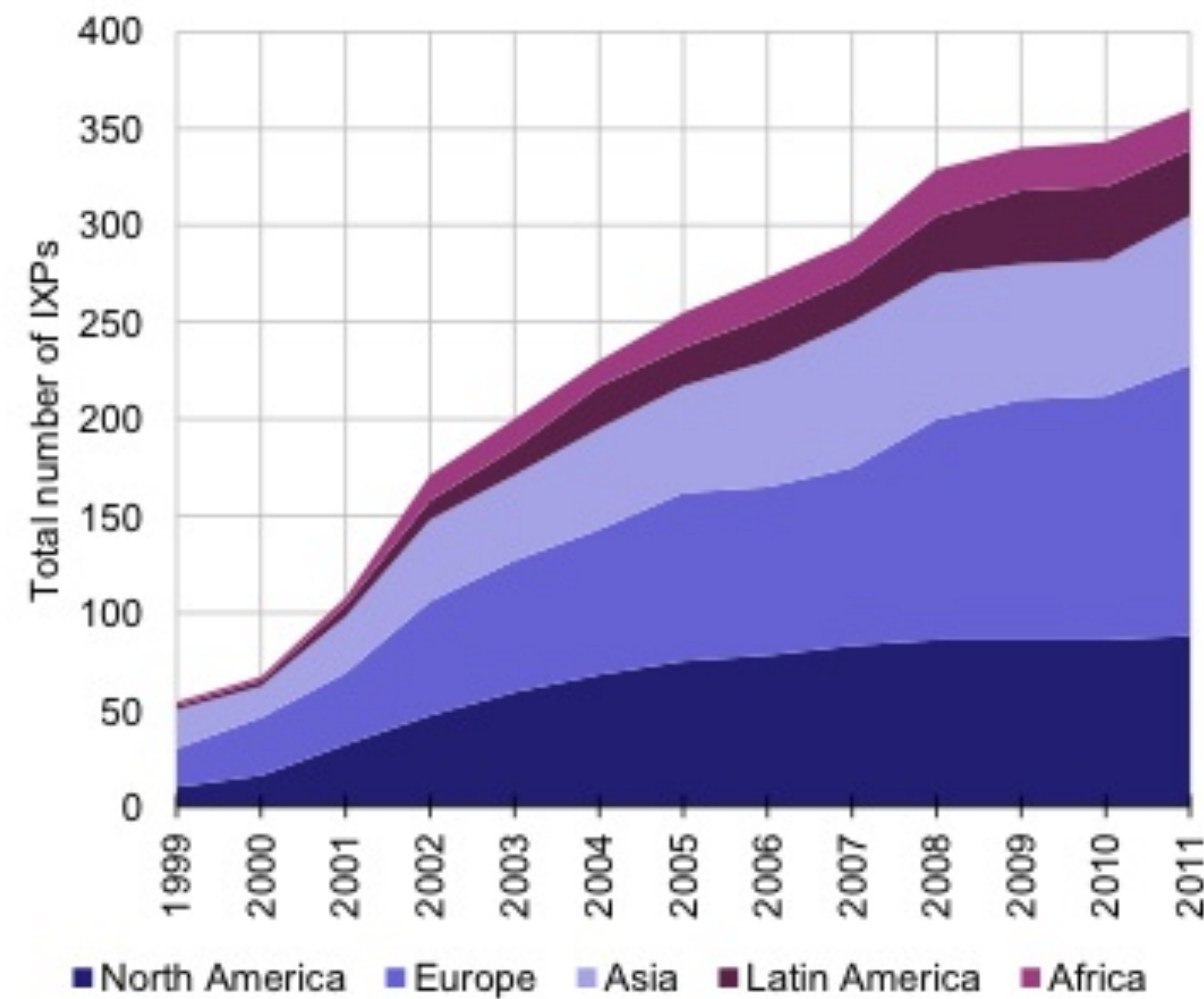


Figure 4.5: Number of IXPs in the world, by region
[Source: Packet Clearing House (www.pch.net), Analysys Mason estimates]



INTRO

Today, many Internet companies build and scale their own networks.

Network costs migrate in DIY. Own operational efficiency comes first.

This is a **big shift** in IXP customers' motives.

WHAT TRENDS WILL SHAPE IXP DEVELOPMENT IN THE NEAREST FUTURE?



OTT VIDEO IS TAKING OVER

- We skip the usual traffic charts (Cisco VNI, Netflix web traffic share, etc.)
- This is not about traffic change, this is about **audience change**.
- Millennials (b.1980-2000) use Internet as primary source of video content.
 - 46% of young adults watch YouTube videos every day — L.E.K Consulting
 - In 2013, Russia became #1 market of smart TV sales for LG.
- Traditional media have no choice but to shift to OTT to follow their audience and preserve ad revenues.
- CDNs (and in-house distributed caches) will remain the primary source of Internet traffic. **Localized caching within ISPs is the new peering.**



ENTERPRISE IT IS GOING WEB-SCALE

- Only ~24% of 100 latest ASN attributions in RU zone can be considered ISPs.
- Who gets ASNs nowadays? Here's a random selection from RU ASN registrations:

AS name	Company	Segment
AS203809, BITRIX-AS	Bitrix OOO, RU	Cloud CMS
AS203841, RUSACCREDITATION	RusAccreditation. Federal Service for accreditation, RU	State Agency
AS203843, EKASSIR-AS	LLC "Ekassir", RU	E-commerce
AS204230, GAZPROM-EP-INT-SERVICES-AS	Gazprom EP International Services B.V., RU	Energy company
AS204255, KMPP-AS	"Myasokombinat "Kunkurskij", RU	Food factory

ENTERPRISE IT IS GOING WEB-SCALE

- Enterprises in need of speed, scale and flexibility use cloud platforms to match IT service delivery capabilities of Amazon, Google, Netflix and other cloud firms.
- API is the digital glue.
- Agile development, Lean production, Uberisation, Big Data, buzz, buzz
-> massive outsourcing of IT business tasks -> **massive growth of online transactions.**
- **Web-scale IT requires instant and reliable connectivity between networks.**



HOW MSK-IX RESPONDS



*«Те, кто не освоят Agile сегодня,
в текущих бизнес-процессах, будут
лузерами завтра.»*

*Those who will not embrace Agile in today's
business processes will be tomorrow's losers.*

Herman Gref
CEO of Sberbank, AS35237 @ MSK-IX



PROVIDING IX SERVICES IN FOCAL TRAFFIC POINTS



- 9 IX locations in Russia, +1 in 2016 (TBA)



MSK-IX provides one-stop solution for colocating distributed caches at regional exchanges. Cases: **Yandex** 

PROVIDING BETTER CONNECTIVITY



MIX: Connecting MSK-IX participants from St.Petersburg and Moscow.

Case:



MSK-IX DNS Cloud: 18 locations in 4 continents.

Cases: RU, PΦ, SU, ДЕТИ, TATAR, sochi2014.org.



DUAL CORE topology in Moscow.

Case: all 410 participants



LEVERAGING IXP KNOW-HOW IN ADJACENT FIELDS

- Media logistics: MSK-IX aggregates and delivers MPEG-TS signal from broadcasters and TV channels to cable/OTT operators.

Case:





HELPING MSK-IX PARTICIPANTS TO BUY&SELL IP-CENTRIC SERVICES



RemoteIX partnership program: 20+ operators provide capacity for remote connection to MSK-IX.

Coming soon:

- Branded access VLANS

Targeting service providers: ISPs, SaaS, anti-DDoS, ...

- Customers' marketplace <http://my.ix.ru> .

OMG! Customers will be able to buy&sell IP-transit @ MSK-IX.



THANK YOU. QUESTIONS?



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