IGF2010 – IPv6 around the world workshop

IPv6 activities, iniciatives, cooperation and operational deployment in Slovenia

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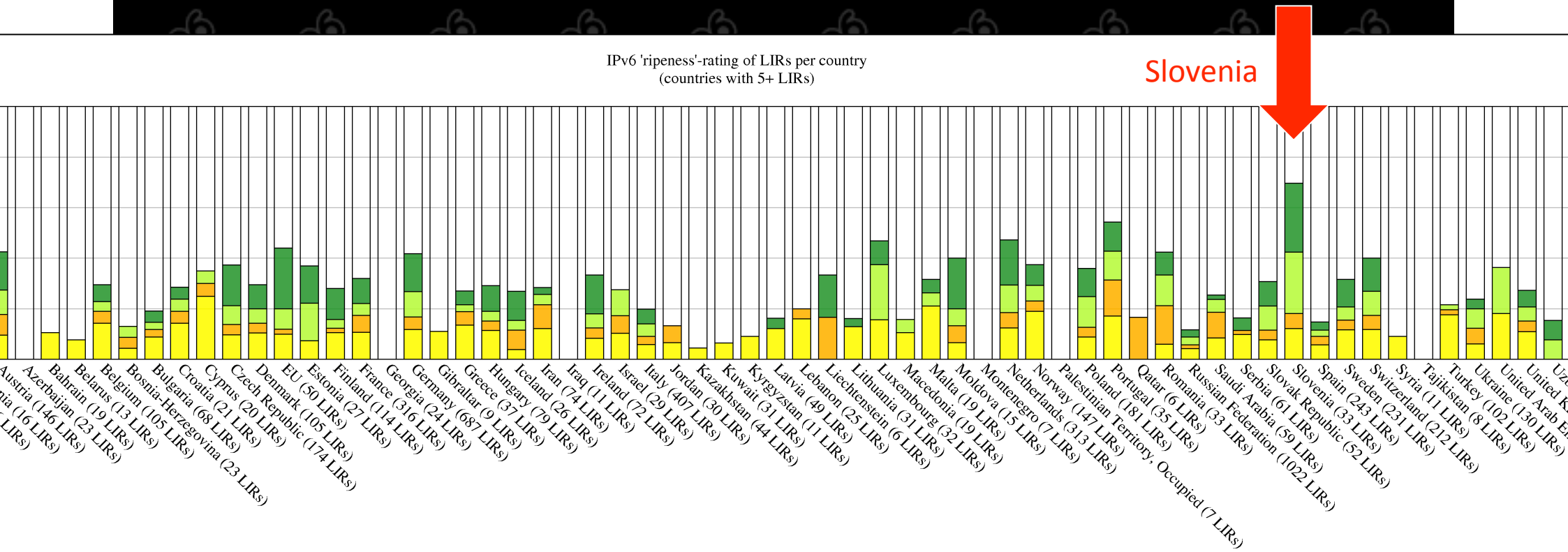
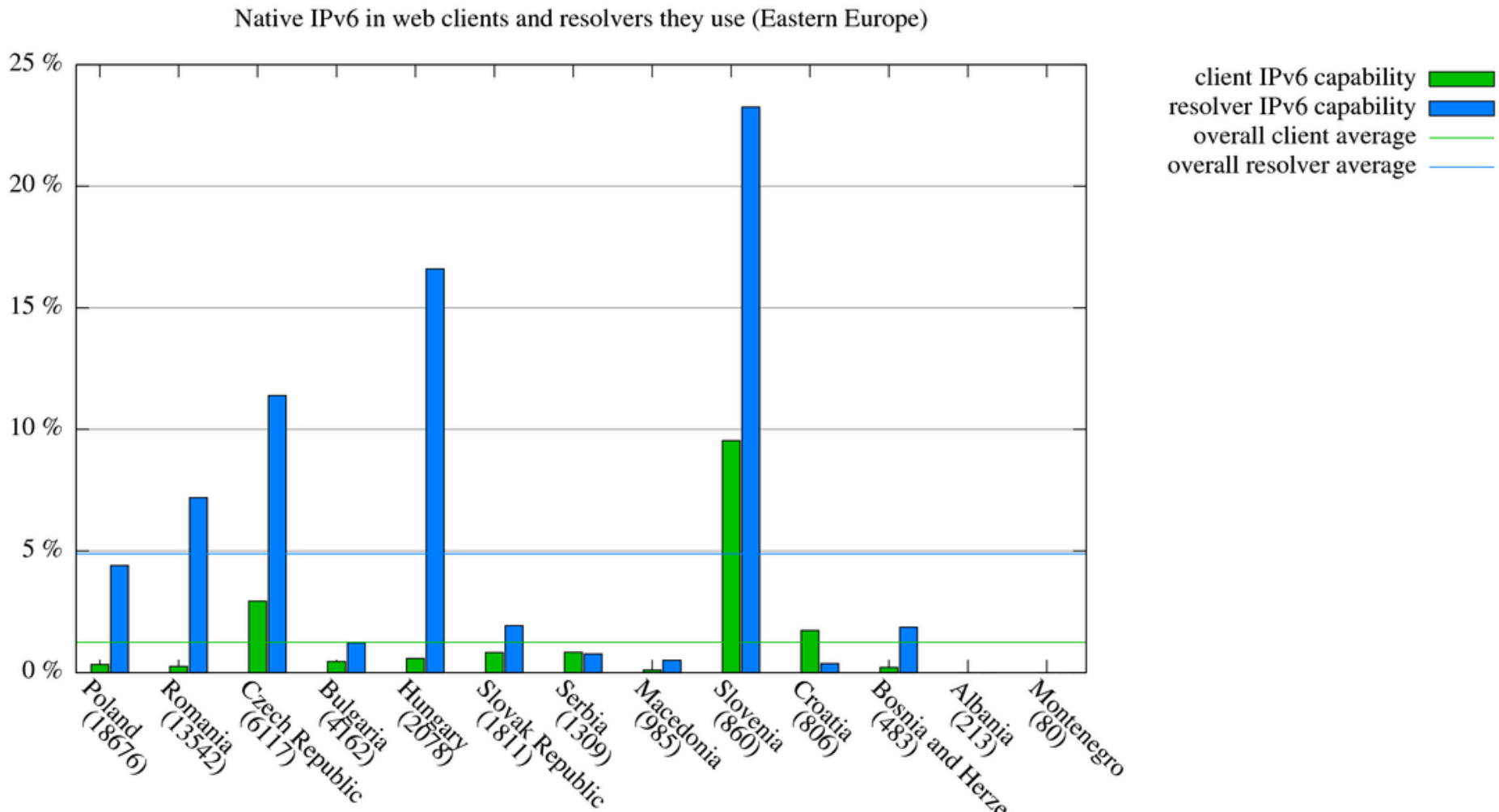
Agenda

- Few words about go6 institute
- IPv6 deployment in Slovenia
- IPv6 in two slovenian cellular networks
- Our IPv6 deployment acceleration proposal to Internet search engines

IPv6 in Slovenia



IPv6 in Slovenia



Go6 institute

- IPv6 initiative in Slovenia
- Not-for-profit organisation
- Strategic partnership with Arnes and LTFE
- Open platform, based on membership (major ISP, mobile operators, content providers, integrators,…)
- Financially supported by members of go6 platform
- Steered by go6 expert council, formed from representatives of government, telco&post regulator, academic research network, faculty, Slo IPv6 WG chair and industry

go6

domenca
ime je osebnost.

arnes

LIFE

Slovenska iniciativa za prehod na IPv6

Google

Objavljeni so video posnetki iz 6::gle IPv6 implementors konference, za prvi vtis si lahko ogledate video zapis mojega predavanja in Rokove predstavitve uvedbe IPv6 v Iskratel CPE na panelni razpravi proizvajalcev CPE opreme... (Read the article)

Translate
Comments(1)

latest

Bo IANA ostala brez IPv4 naslovnega prostora že letos decembra?

Avtor JanZorz, 18.Jun 2010, 22:59 (GMT 2), Objavljeno v IPv4 exhaustion Edit

V zadnjem času je v širšo javnost pricurljala novica, da bo IPv4 naslovnega prostora zmanjkalo, zato se je začela "gonja" za preostalimi naslovi. Prišlo je celo do takšnih ekstremov, da je ARIN v prvi polovici letošnjega leta razdelil več (10 /8) naslovov kot je v celotnem letu 2009 (8 /8). Le kdo je to skrivnost nenadoma razodel širnemu svetu? Kakšna drama, dragi gledalci in gledalke, kakšna drama (bi najbrž vpil Miran Ališič, če bi komentiral to tekmo izčrpavanja naslovnega prostora)... (Read the article)

Translate
Comments(0)

Telekom Slovenije

Srebrni člani:

ISKRATEL

Člani in sponzorji:

astec

CHS

APEK

zanesljivo amis

T2

tušmobil
Čisti računi.

Iskra

V postopku včlanitve:

s!mobil

Go6 expert council

- Davor Šoštarič – Ministry for high school, science and technology
- Urban Kunc – Apek (Agency for post and telecom regulation)
- Matjaž Straus – Arnes (Slo NREN)
- Janez Sterle – Laboratory for Telecommunications on faculty of electrotechnics
- Matjaž Lenassi – representative of industry
- Simeon Lisec – IPv6 WG chair, leader of IPv6 deployment in national Telekom
- Jan Žorž – Go6 co-founder and expert council chair

Go6 expert council official meetings

Go6 activities

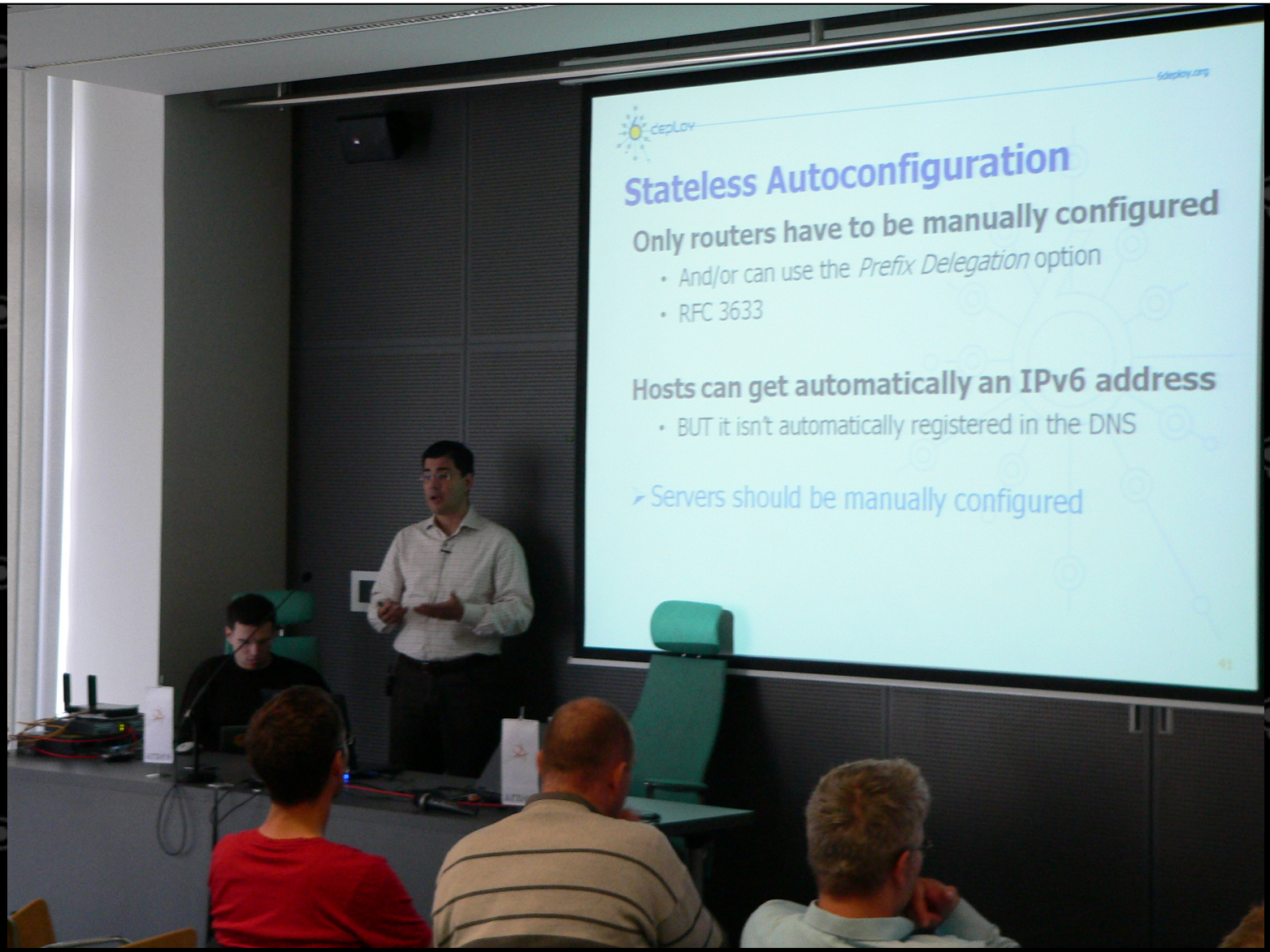
- IPv6 working group – IP experts from industry
- Slovenian IPv6 summits (3rd done in may 2010)
- Initial IPv6 consulting to members of platform
- 6DEPLOY workshops – organizing events
- Operating and hosting 6DEPLOY lab
- A+P RFC draft (draft-ymbk-aplusp)
- Go6 academy – aggregation of IPv6 education
- Go6lab – testing, testing, testing…
- World wide IPv6 speeches on various conferences

IPv6 WG

- Preparing the document, describing the requirements and compliancy of ITC equipment with IPv6 standards and also experience/knowledge needed for integrators
- Evaluation and certification of IPv6 courses, offered by Go6 academy
- Helping government with preparation of IPv6 action plan, hopefully becoming national strategy later.
- Mixed form of task force, RIPE WG and IETF WG

6DEPLOY workshops attendees

6DEPLOY workshops (GRnet)



Slo IPv6 summits

- World known keynoters – Woiciech Dec (Cisco), Martin J. Levy (HE), Daniel Karrenberg (Chief scientist RIPE-NCC), Patrik Faltstrom (in november)
- Presenters from around the world
- Presenters from Slovenia (important)
- Updates minutes – big push, deployment engine
- Round tables, initiated by Ministry for science and technology

Slo IPv6 summits (130 attendees!)

Slo IPv6 summits (high-level openings)
CTO of Arnes and secretary of Ministry of S&T

Slo IPv6 summits

Martin J. Levy, director of IPv6 strategy, Hurricane Electric

Slo IPv6 summits (round tables – high-level)

Sharing IPv6 knowledge around the world

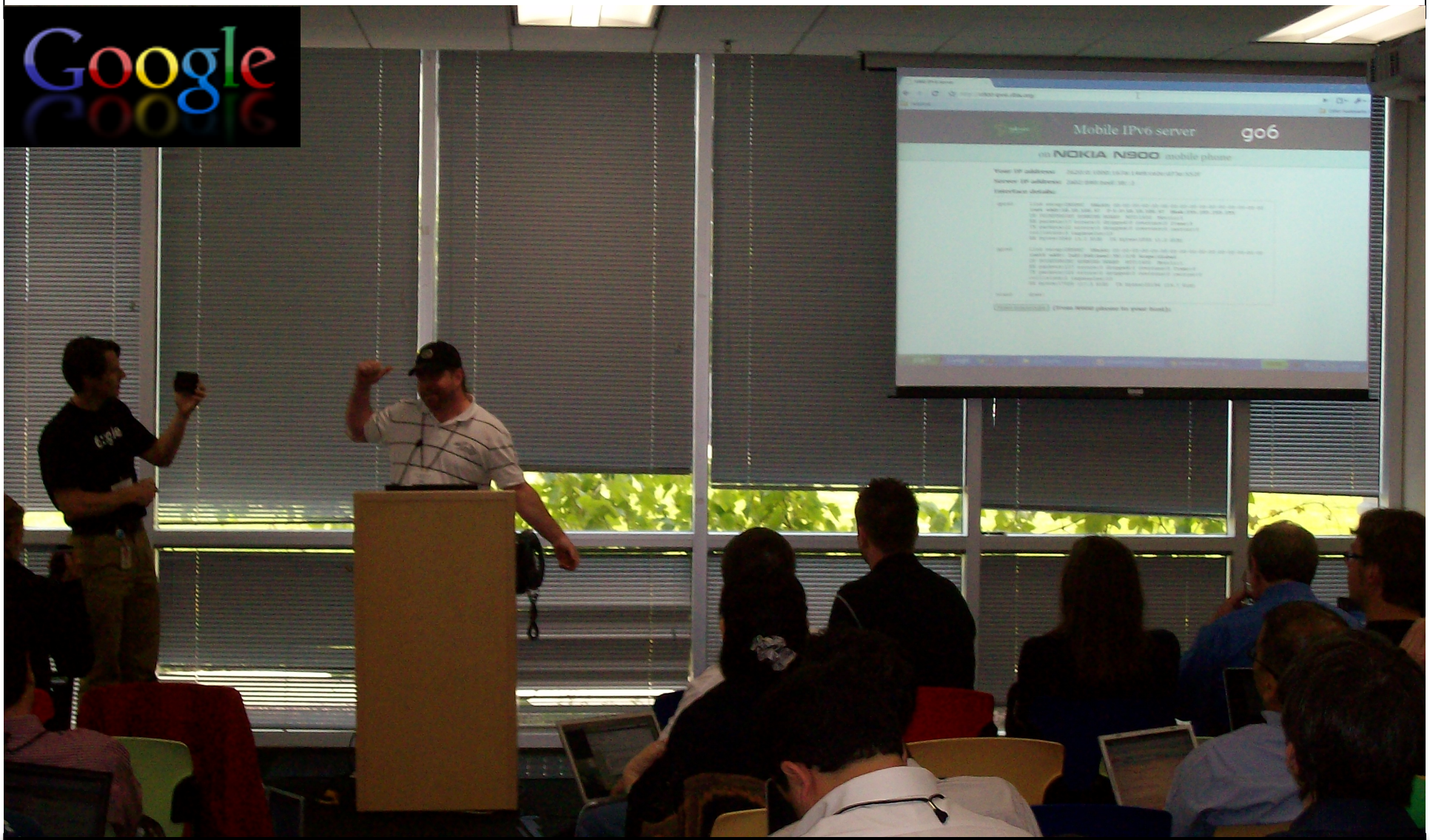
It's very important to share our knowledge, expertise and experience in IPv6 implementation with other IPv6 Task Forces, IPv6 iniciatives and audiences around the world!!!

Thank you for finding our ideas interesting.

Around the world (Infosek 2008/2009)

Around the world (RIPE60 Prague)

Around the world (Google IPv6 conference)



Around the world (Greek IPv6 summit)

Around the world (3rd German IPv6 summit)

Mission, goal, quest…

- We make people talk to each other about IPv6
- We push IPv6 deployment in Slovenia
- We aggregate knowledge and make it available between members of go6 platform
- We connect government, regulator, ISP's and industry between each other
- We make competition companies talk to each other to make IPv6 deployment easier
- We became IPv6 pivot point in Slovenia
- …and it works ☺

Result...

LG	Prefix	tld	NetName	Owner	AS	S	Allocated	First seen	Seen by	Last seen (*)
LG	2001:67c:58::/48		SI-NIL-NET6	NIL Podatkovne komunikaci...	24629	A	2009-09-07	2009-09-09 11:32:31	99%	2010-06-21 09:17:41
LG	2001:67c:124::/48		SI-LinIT	LinIT , Informacijske Teh...		A	2010-01-25	2010-01-27 08:47:35	96%	2010-06-21 09:17:41
LG	2001:67c:1a0::/48		PROPLUS-SI	PRO PLUS, d.o.o.		A	2010-03-11		0%	never
LG	2001:67c:1fc::/48		SI-SMART-COM	Smart Com d.o.o.		A	2010-05-14		0%	never
LG	2001:7f8:46::/48		ARNES-SIX-IPv6-NET-2...	Slovenian Internet Exchan...	2107	A	2008-10-03	2008-10-23 08:47:34	90%	2010-06-21 09:17:41
LG	2001:1470::/32		SI-ARNES-20030618	ARNES (Academic and Resea...	2107	A	2003-06-18	2003-07-22 08:21:58	100%	2010-06-21 09:17:42
LG	2001:15c0::/32		SI-MEDINET-20031002	Amis d.o.o.	8591	A	2003-10-02	2003-10-05 16:41:08	100%	2010-06-21 09:17:42
LG	2001:1688::/32		SI-BONE-20031216	Triera Internet	3212	A	2003-12-16	2004-06-27 19:20:37	100%	2010-06-21 09:17:42
LG	2a00:ee0::/32		SI_TELEKOM-20081120	Telekom Slovenije d.d.	5603	A	2008-11-20	2010-02-09 14:02:36	100%	2010-06-21 09:17:42
LG	2a00:fc0::/32		SI-VOLJA-20081210	voljatel	16016	A	2008-12-10	2009-02-10 13:32:38	99%	2010-06-21 09:17:42
LG	2a00:1368::/32		SI-LT-FE-20090915	University of Ljubljana,...	28933	A	2009-09-15	2010-05-06 14:32:41	100%	2010-06-21 09:17:42
LG	2a00:13d8::/32		SI-MMTC-20090922	Telemach d.o.o.		A	2009-09-22		0%	never
LG	2a00:1420::/32		SI-MOBIK-20090924	Mobik IPv6 network	44993	A	2009-09-24	2009-10-06 09:32:33	99%	2010-06-21 09:17:42
LG	2a00:1438::/32		SI-TSMART-20091002	TELESMART podatkovne komu...	49630	A	2009-10-02	2009-11-23 23:32:35	100%	2010-06-21 09:17:42
LG	2a00:1448::/32		SI-ELEKTROTURNSEK-20...	Elektro Turnsek d.o.o.	42613	A	2009-10-05	2009-11-23 23:32:35	100%	2010-06-21 09:17:42
LG	2a00:1600::/32		SI-UNI-MB-20091106	Univerza v Mariboru	50195	A	2009-11-06	2009-12-31 00:02:36	100%	2010-06-21 09:17:42
LG	2a00:1a20::/32		SI-MOBIL-20100125	SI.MOBIL d.d.		A	2010-01-25		0%	never
LG	2a00:1c80::/32		SI-ARIO-20100304	ARIO, d.o.o.		A	2010-03-04		0%	never
LG	2a00:1da8::/32		SI-NAKOM-20100317	Nakom d.o.o.	49725	A	2010-03-17	2010-03-18 09:02:39	100%	2010-06-21 09:17:42
LG	2a01:260::/32		SI-T-2-20061201	T-2 d.o.o.		A	2006-12-01		0%	never
LG	2a02:e8::/32		SI-DOMENCA-20080229	Domenca d.o.o.	43128	A	2008-02-29	2008-11-12 08:47:36	100%	2010-06-21 09:17:42
LG	2a02:7a8::/32		SI-RTVSLO-20080911	RTV Slovenija	47917	A	2008-09-11	2009-02-12 09:32:28	100%	2010-06-21 09:17:42
LG	2a02:800::/32		SI-SOFTNET-20081217	Softnet d.o.o.	9119	A	2008-12-17	2009-11-24 14:32:35	97%	2010-06-21 09:17:42
LG	2a02:840::/32		SI-TUSMOBIL-20090105	TUSMOBIL D.O.O.	41828	A	2009-01-05	2009-09-25 11:32:33	98%	2010-06-21 09:17:42
LG	2a02:d68::/32		SI-SGN-20090420	SGN d.o.o.	35471	A	2009-04-20	2009-04-25 22:02:29	100%	2010-06-21 09:17:42
LG	2a02:d80::/32		SI-NETSI-20090421	Metaling d.o.o.	12778	A	2009-04-21	2009-04-25 22:02:29	100%	2010-06-21 09:17:42
LG	2a02:d90::/32		SI-STELKOM-20090422	Stelkom d.o.o.		A	2009-04-22		0%	never
LG	2a02:e20::/32		SI-MOBITEL-20090507	Mobitel d.d.	29276	A	2009-05-07	2009-12-04 14:32:35	97%	2010-06-21 09:17:42

The database currently holds 28 IPv6 DFP's.
Of which 0 (0.00%) are reclaimed, 0 (0.00%) are returned to the pool and 7 (25.00%) IPv6 DFP's didn't have a routing entry.
Thus 21 (75.00%) networks are currently correctly announced.

IPv6 in Slovenia (as seen by our telco regulator)

Apek – Agency for post and electronic communications

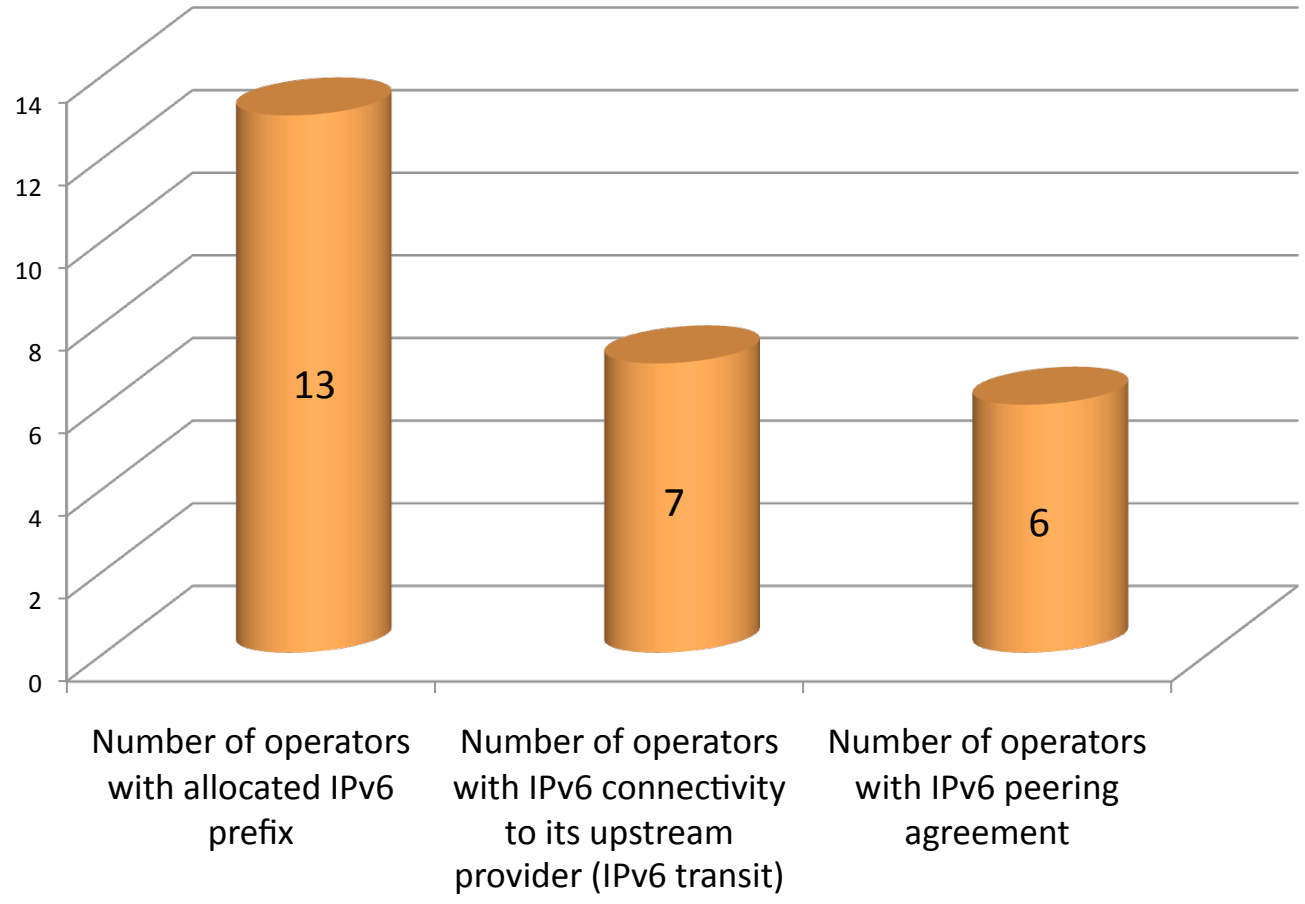
IPv6 survey conducted in April 2010 by Apek

Number of respondents (41 operators and ISPs)

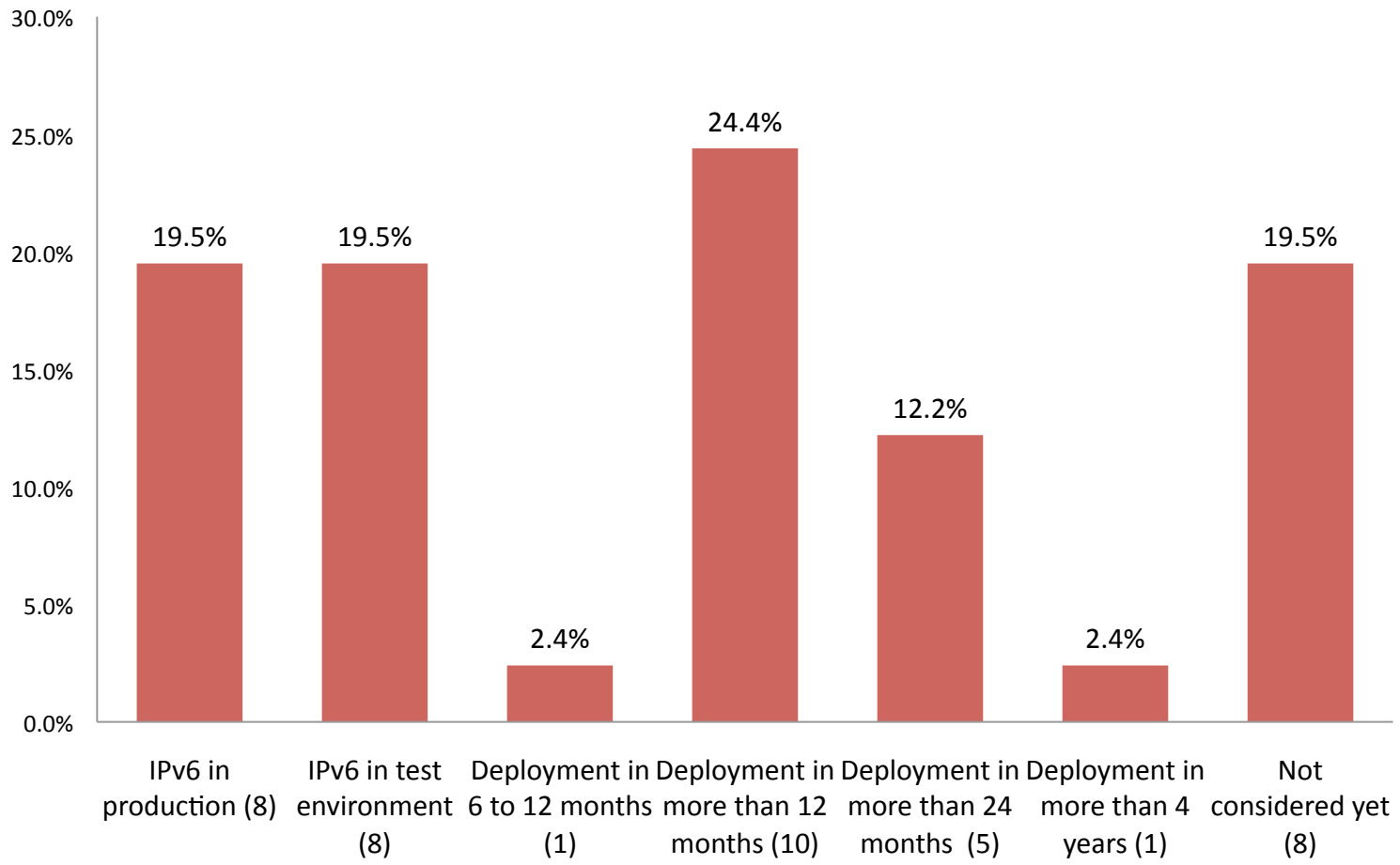
5 of them have majority (90%) of residential and business users

For full survey analysis and questions:
urban.kunc@apek.si

IPv6 in Slovenia (as seen by our telco regulator)



IPv6 in Slovenia (as seen by our telco regulator)

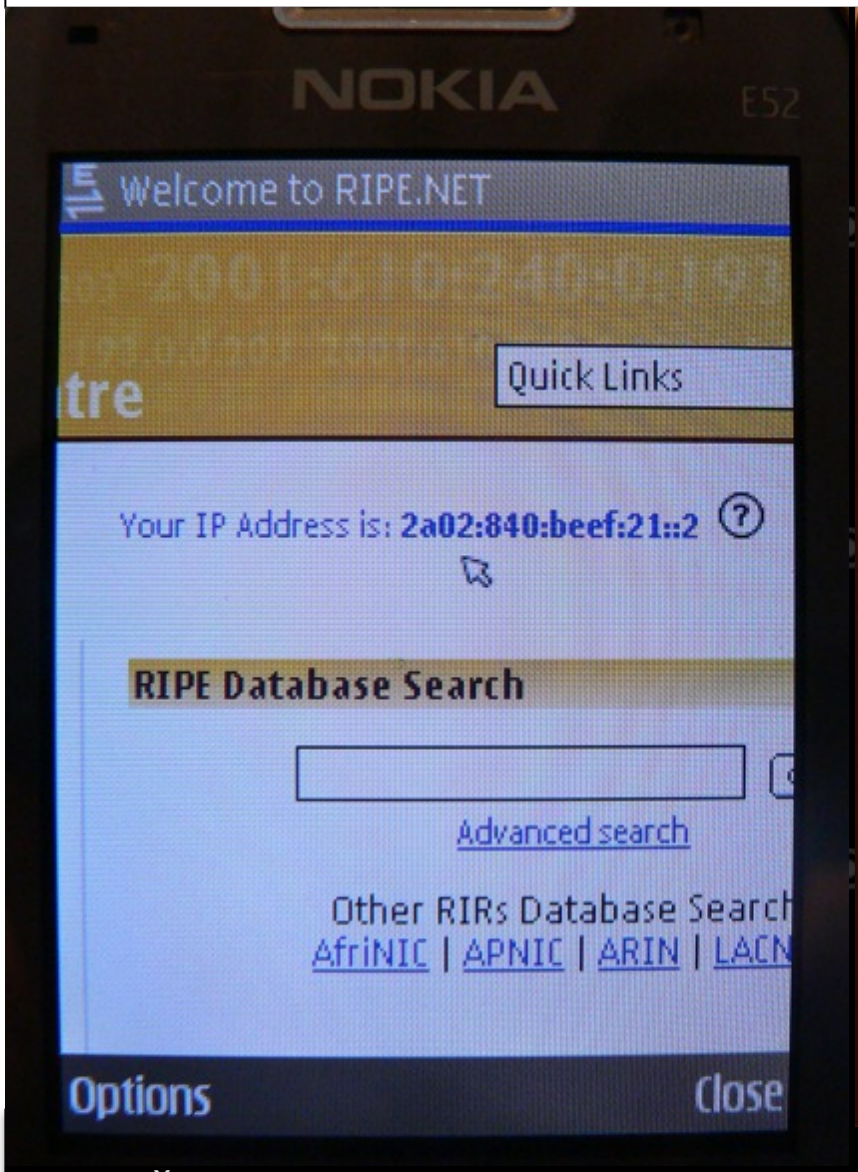


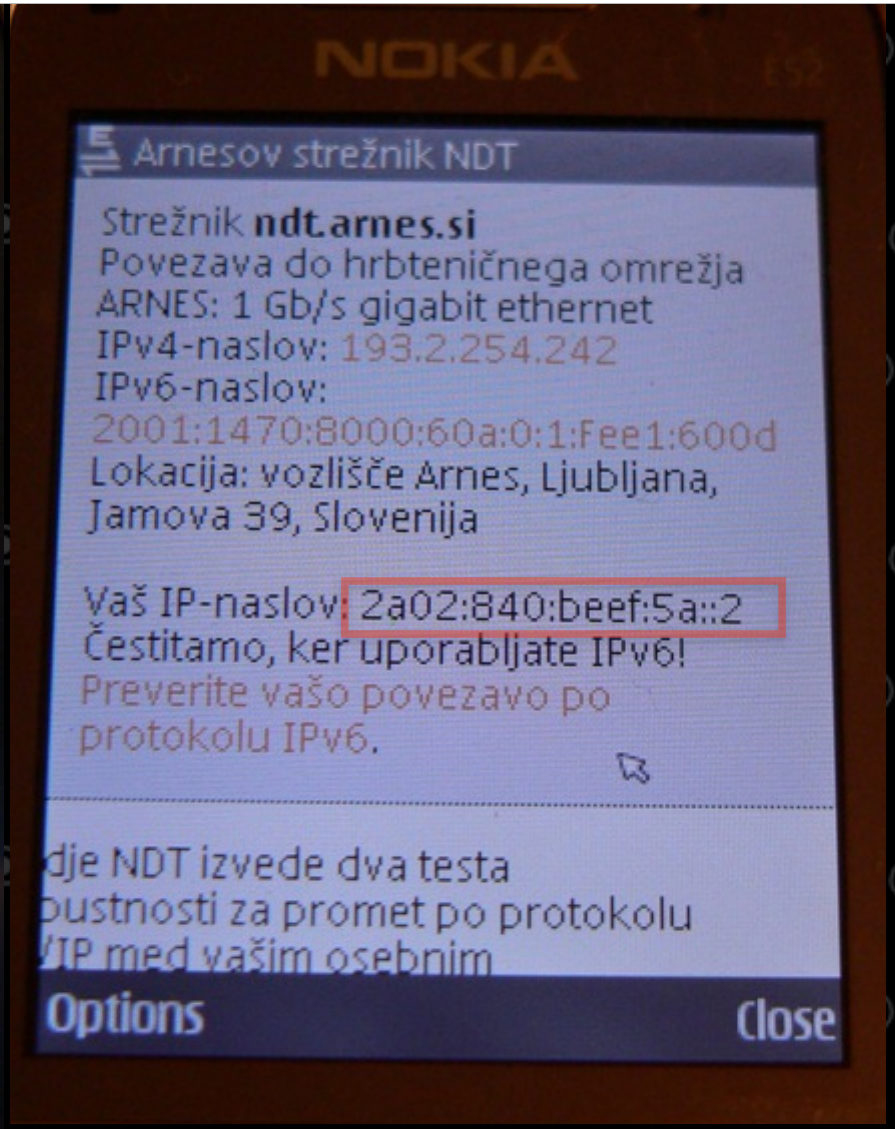
Deployment in Slo: Go6 as IPv6 advocate

IPv6 in Slovenia:

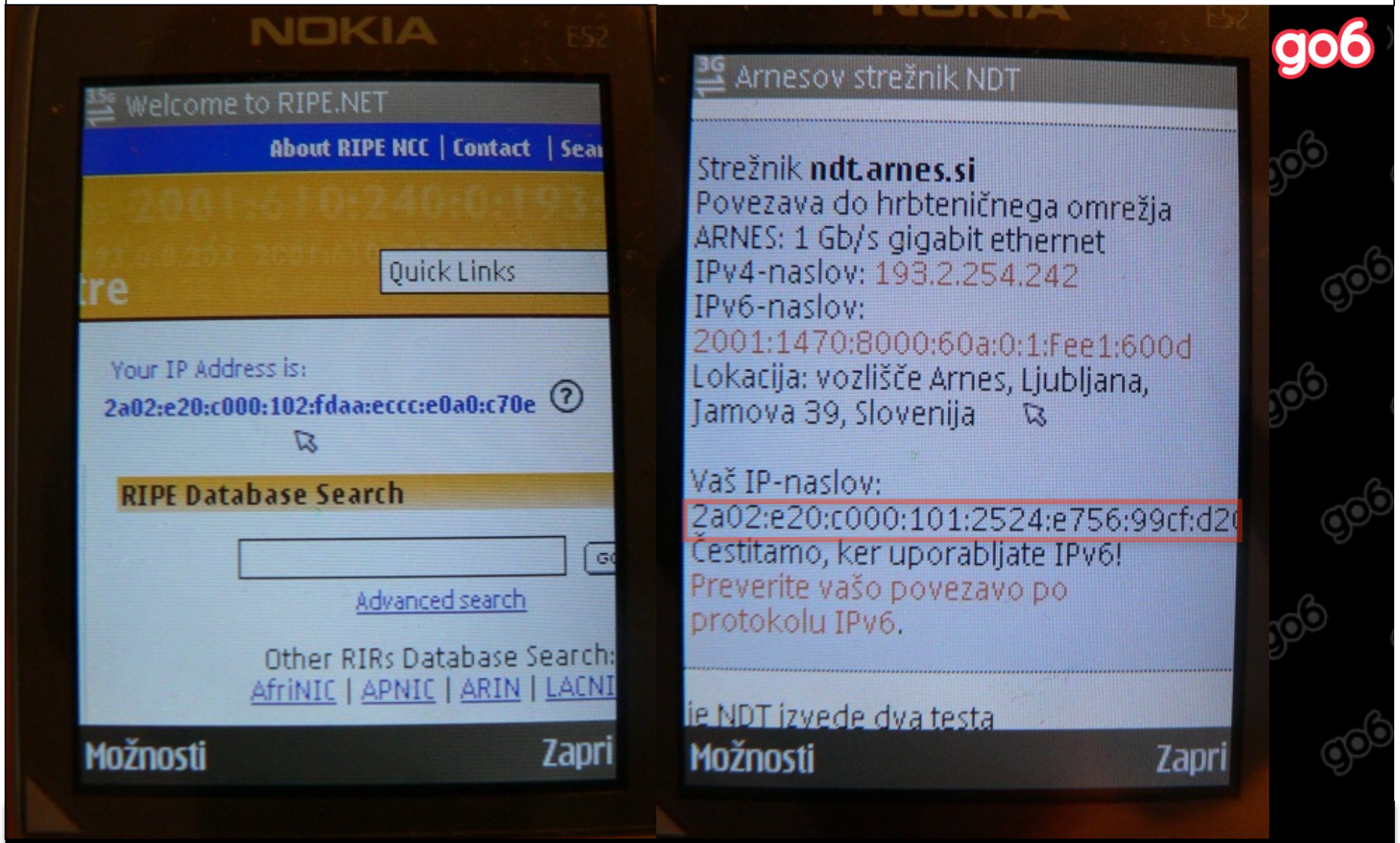
- Mobile major 3G cell networks: 2 done, 1 to go...
- "Landlines" ISP – partially done
  - *Business customers (3 ISP ready)*
  - *Residential customers (2 ISP deploying)*
- Showstoppers in residental IPv6 access: CPE
- Content providers: National TV, search engines, other content providers going to IPv6

Tušmobil - 2a02:840::/32AS41828

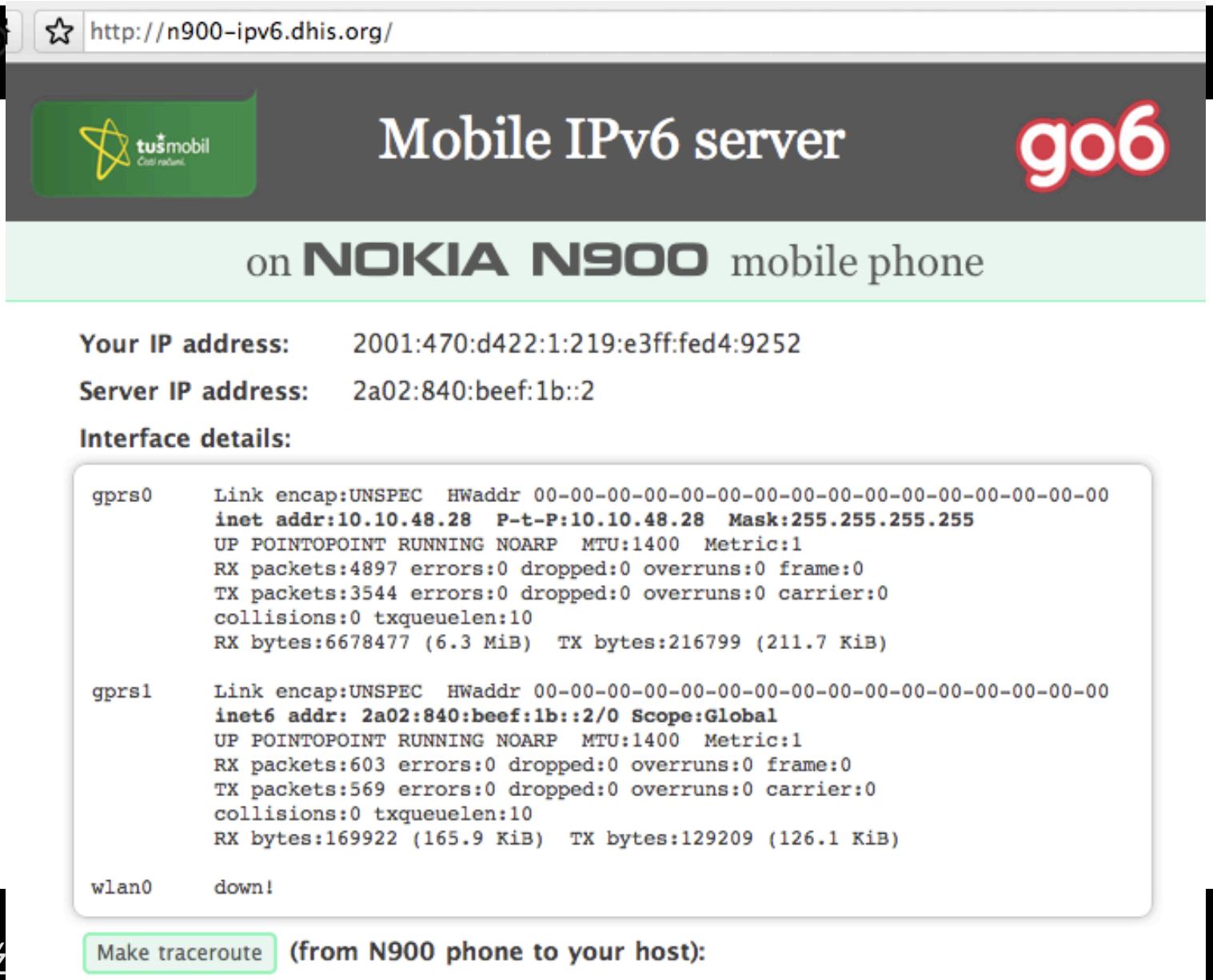




Mobitel - 2a02:e20::/32AS29276



Nokia N900 – dualstack and DSMIPv6



Show stoppers…

What is still missing?

- No wide support in mobile terminals (currently symbian only)
- Content based charging – not existent
- Limited or no support for dual-stack in terminals

Proposal for search engines

Deployment and adoption of IPv6 is slow at this point in time. This can be a risk for future growth of the internet. One of the observed obstacles is that content providers are waiting for IPv6 viewers, and viewers are waiting for IPv6 content. We propose a slight change the search engine scoring algorithms to stimulate content providers to make their content accessible over IPv6. -> *http://go6.si/proposal/*

Proposal for search engines

Results:

- Together with Latif Ladid and David Holder we got attention and response from Vint Cerf
- Google is now studying possible negative impacts in case they implement it
- Huge support and consenzus from wide Internet community
- Win-Win: nobody is hurt, content goes v6

Contacts...

- Questions regarding go6 institute, platform and Slo IPv6 initiative: jan@go6.si
- Questions regarding IPv6 in Tušmobil: miha.petkovsek@tusmobil.si
- Questions regarding IPv6 in Mobitel: primoz.jenko@mobitel.si
- Everything else: jan@go6.si

Questions?

- Thank you.

http://go6.si/