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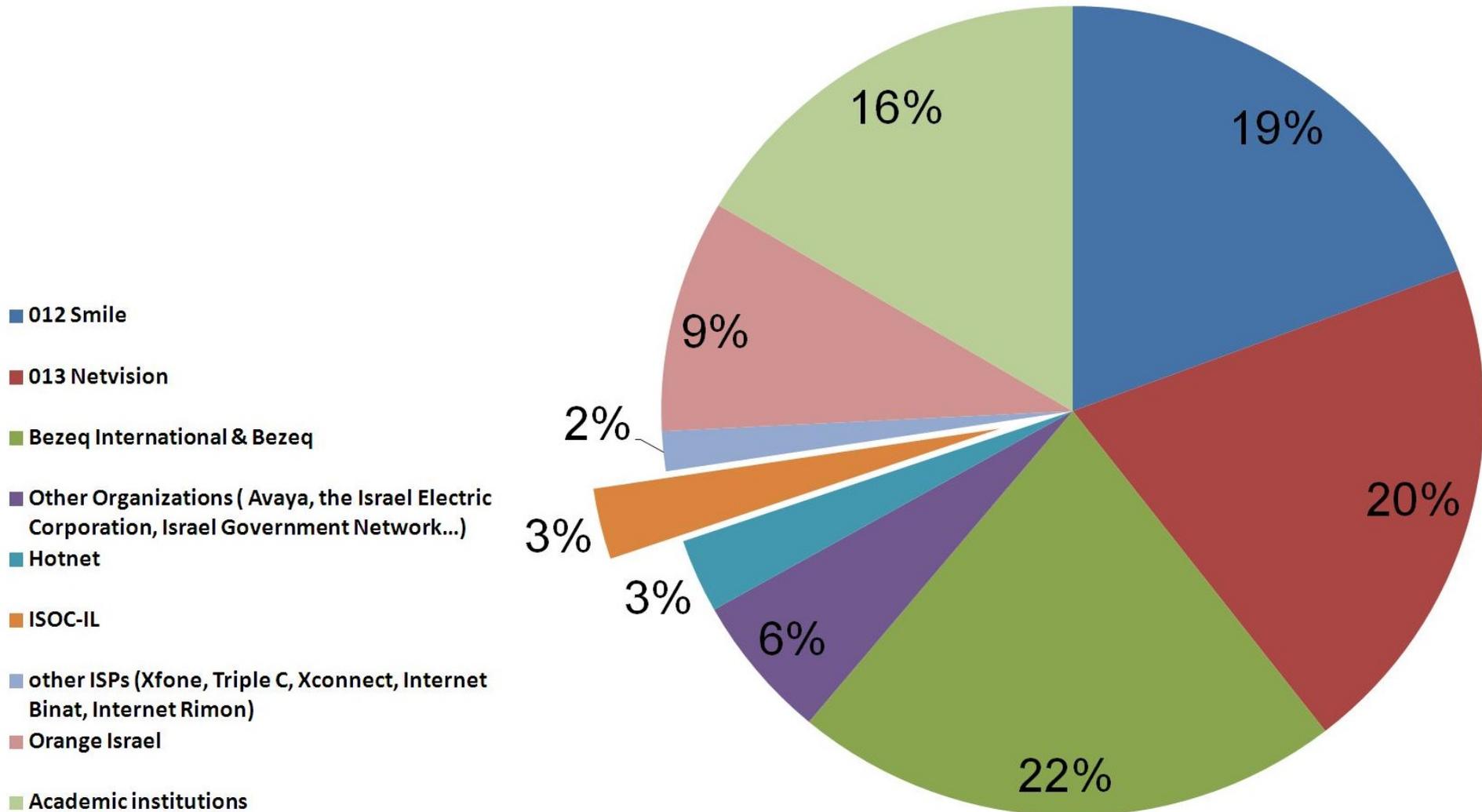
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ISOC-IL IPv6 policy initiative

Yoram Hacoheh, CEO ISOC-IL

IPv4 address allocation for IL-LIRS



IPv6 policy initiatives in Israel

4/2011 – ISOC-IL IPv6 policy paper:

- IPv4 addresses reservoir is about to end
- Almost no adoption of IPv6 in Israel
- Governmental push can solve the dead lock:
 - MOC – force ISP in implement
 - MOF – mandate IPv6 in governmental procurements



5/2011 – Knesset Science and Technology committee discussion:

- MOC CEO –
 - Not sure if the government should act in the internet domain
 - Not sure that there is a problem with address allocation
 - Not sure that MOC is the relevant actor
- No OMB (“hashcal”) representative

ISOC-IL updated IPv6 policy paper of Israel

Result: you know...

ISOC-IL strategic plan for 2016 – advance various internet-related policy initiatives:

- First bunch: IPv6, Children Privacy, Digital inheritance
- IPv6 - Hired Eran Graff to research and write.
- Will present current IL status (both technical & policy), Worldwide comparison info (deployment and policy initiatives), Technical status
➔
- offer (again) proper policy and economic incentives to adopt ➔
- public discussion ➔
- policy promotion by ISOC-IL
- Please cooperate with Eran!



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IPv6 Day Israel

IPv6 deployment at ISOC-IL, current status and
upcoming changes (tech overview)

[Ariel Biener <ariel@isoc.org.il>](mailto:ariel@isoc.org.il)

IPv6 deployment at ISOC-IL

➤ IIX

➤ .il registry and DNS services

➤ ISOC-IL infrastructure

IPv6 deployment at ISOC-IL

IIX

- IPv6 support activated on 15/02/2008
- First v6 peer was IUCC/ILAN (Israeli Academic Network)
- First commercial ISP was Bezeq International soon after
- The next to connect were mid sized ISPs
- Currently 10 out of 17 [peers](#) have IPv6 connectivity
- Current IPv6 adoption in Israel is low (0.6%), compared to the US (29.58%) and Western Europe (12-25%) - [stats](#) by Google
- The large/popular content provider websites in Israel do not support IPv6 - see list [here](#). IPv6 traffic at the IIX is minimal.
- More about IIX:

<http://en.isoc.org.il/iix/2x.html>

<http://www.isoc.org.il/technologies-and-infrastructure-services/iix>



IPv6 deployment at ISOC-IL



כללי		חדשות		שופינג							
כניסות במיליונים	מכשירים ניידים	כניסות במיליונים	מחשבים שולחניים	כניסות במיליונים	מכשירים ניידים	כניסות במיליונים	מחשבים שולחניים	כניסות במיליונים	מכשירים ניידים	כניסות במיליונים	מחשבים שולחניים
252.2	google.co.il	380	google.co.il	52.5	ynet.co.il	88.3	ynet.co.il	10.1	aliexpress.com	20.5	ebay.com
154.2	facebook.com	257.5	google.com	39.6	news.walla.co.il	67.4	news.walla.co.il	9.3	ebay.com	20.4	aliexpress.com
131.4	google.com	239	facebook.com	23.2	mako.co.il	34.3	mako.co.il	5.3	alibaba.com	17.5	alibaba.com
120.9	youTube.com	227	youTube.com	9.5	panet.co.il	15.4	haaretz.co.il	4.3	amazon.com	12	amazon.com
52.5	ynet.co.il	88.3	ynet.co.il	6.6	nana10.co.il	12	nana10.co.il	1.8	buy2.co.il	5.7	buy2.co.il
39.6	walla.co.il	67.4	walla.co.il	6.3	haaretz.co.il	11.6	globes.co.il	1	wallshops.co.il	2.7	wallshops.co.il
23.2	mako.co.il	34.3	mako.co.il	5.7	fxp.co.il	11.2	themarket.com	0.9	ksp.co.il	2.5	ksp.co.il
10.1	aliexpress.com	20.5	ebay.com	4.8	themarket.com	10.8	calcalist.co.il	0.8	ivory.co.il	1.9	ivory.co.il
9.5	panet.co.il	20.4	aliexpress.com	4.7	globes.co.il	10.6	msn.com	0.7	super-pharm.co.il	1.7	etsy.com
9.3	ebay.com	20.2	ok.ru	4.7	tapuz.co.il	10	nrg.co.il	0.6	ikea.co.il	1.4	asos.com



IPv6 deployment at ISOC-IL

.il registry and DNS services

- 5 out of the 9 domain name servers for the .il ccTLD and the ISOC-IL managed 2nd level domains (ac.il, net.il, co.il, org.il, muni.il, k12.il) support IPv6
- Support for AAAA glue records for 3rd level domains was deployed in the registry system in July 2014
- Currently only one Israeli domain has registered a AAAA glue record, despite the fact that there are more Israeli domains that have DNS servers that run IPv6 (for example tau.ac.il)
- More about .il registry and DNS service:
 - en: <http://en.isoc.org.il/domains/registration.html>
 - heb: <http://www.isoc.org.il/domain-name-registry>
 - heb: <http://www.isoc.org.il/technologies-and-infrastructure-services/dns>



IPv6 deployment at ISOC-IL

ISOC-IL infrastructure

- Until 2016, ISOC-IL main website was available over IPv6 via our DR site.
- The scope of the deployment (public facing services, internal systems, desktops) and the potential operational impact was carefully examined
- ISOC-IL decided that it will make all its main services available via IPv6 during 2017
- We intend to publically share our journey towards fully enabling IPv6 in our, hoping to aid others in going the same route



IPv6 deployment at ISOC-IL

ISOC-IL infrastructure

- In order to achieve this goal, we defined a number of steps
 - Mapping our assets in terms of networking needs
 - Creating a IPv6 address allocation scheme that makes sense
 - Defining the required IPv6 firewall/security policies for every network zone
 - Enabling IPv6 in the network core + securing networking equipment using [templates](#) from Team Cymru, while keeping IPv6 disabled on server/desktop interfaces
 - Server-by-server pass, hard disabling IPv6 on all servers
 - Enable IPv6 on two segments (of non-critical services) and then enabling IPv6 on two servers
 - Create a services deployment plan (which services will be enabled first, interdependencies, ATP procedures)
 - Per service backout plan (including interdependencies) should something go wrong
 - A time table (estimating how long each step should take)
 - IPv6 for the backoffice/desktops will be planned and deployed separately, after we have successfully enabled IPv6 on most of our services



Thank You

Contact ISOC-IL IPv6 information desk at
ipv6@isoc.org.il

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