

Spain and IPv6

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Education, Promotion, Awareness and Public Relations WG

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ConsulIntel
Consultores Integrales en Telecomunicaciones

IP TASK
V6 FORCE

IPv6
FORUM

Leading Europe

- In terms of number of ISP's !
 - It was 800, now only 600 – seems stable.
- 4% increase Internet users (Oct. 2000)
 - 6.894.000 (over 14 – population 34.818.000)
 - It was only 1% previous year
- Only 15,8% homes with Internet Access
- Only 2,1% ISDN (Feb. 2001)
- Only 3,1% broadband (Feb. 2001)
 - 1,8% Cable (Feb. 2001)
 - 0,2% Satellite
 - 1,1% ADSL

Services, frequency

- WWW: 89,8%
 - Email: 75%
 - FTP: 29,3%
 - Others: 43,6%
-
- 44% use it everyday

Some Demography

- 61,5% male
- 38,5% female
- Age between 14-19: 18,1%
 - Growing over the average !
- 20-24: 19,7%
- 25-34: 32,2%
- 35-44: 17,8%
- 45-54: 8,4%

More numbers ...

- From where:
 - Home: 56,5%
 - Work: 33,6%
- Social Class:
 - 26,1% - very high
 - 20,3% - high
 - 39,8% - medium
 - Only 12,1% and 1,7% - low and very low

Problems ... that IPv6 solves !

- Very difficult to get an IPv4 address
- Expensive (“sharks” selling IPv4 addresses)
- No good quality/service/speed
- No Security
- No Mobility
- No End-to-End transactions
 - E/M-Commerce is jeopardized !
- What will happen with Mobile Internet, UMTS/3G, “xG”... ?

In the short Future

- The incumbent PTT has promised to deploy 1.000.000 ADSL lines before end of year !
 - What IPv4 address space ?
 - We don't like NAT – no end-to-end !
 - No ADSL modem/router supports IPv6 today!
- Same problem with cable, wireless, “always-on” !
- What about home automation, alarms, monitoring, transport systems (cars, planes, ships, ...) ?

Spain isn't READY !

- Sorry: No any doubt on that.

Spain isn't ready ... for this new Society

- Actually no “official position” on IPv6 and no actual mention of “IPv6” in the official papers.

Indirect Tools to help IPv6

- In order to help IPv6 deployment, there are some “indirect” tools (Science & Technology Ministry):
 - Fiscal help to innovation, internet access, dissemination, training and others (10%)
 - Innovation programs, several funding procedures, covering most of the IPv6 features.
 - The answer is the market: They always fund projects if they follow market trends
- In theory, IPv6 projects will get more benefits because address all the key issues
- No understanding of the problem from other official representatives

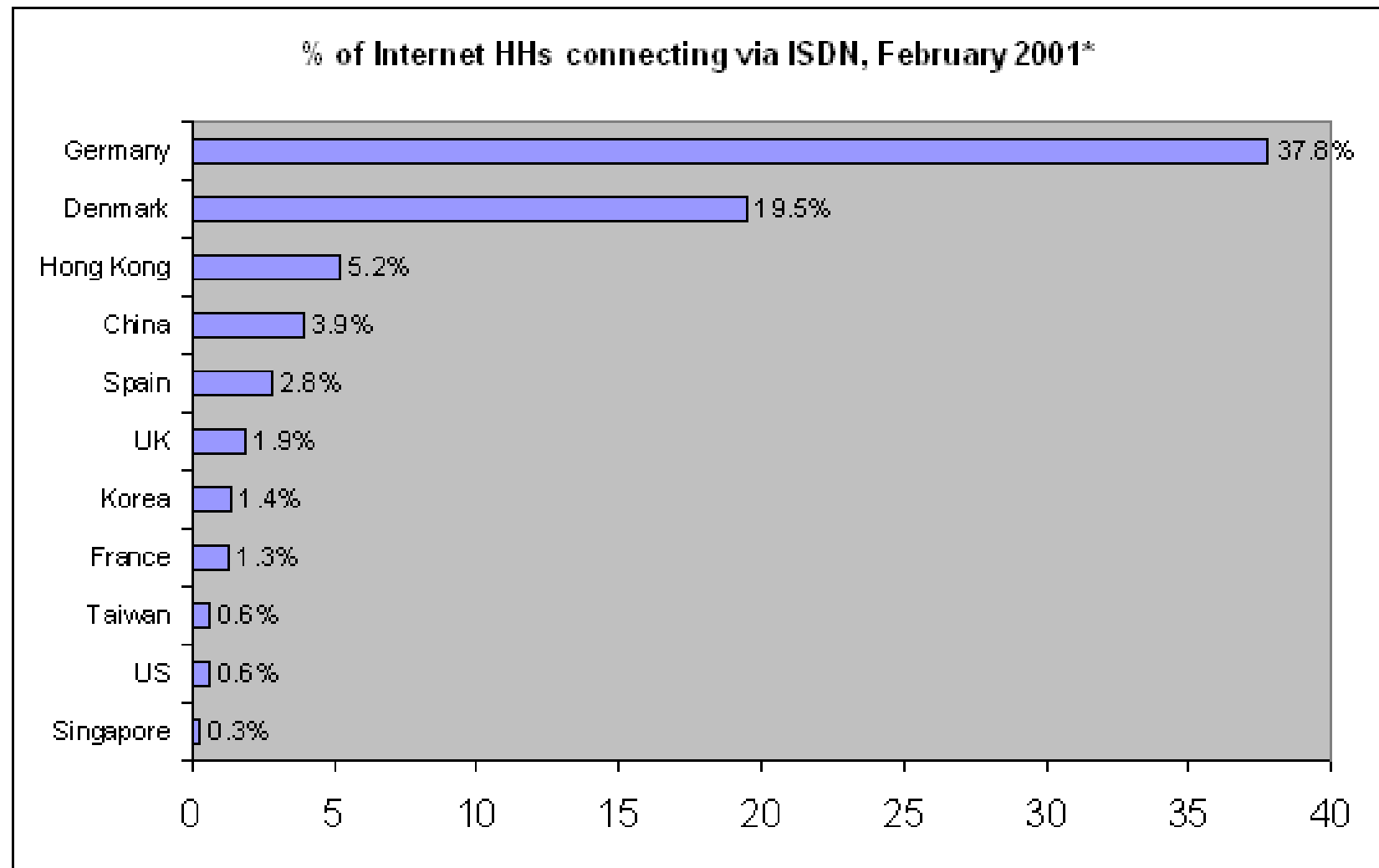
IPv6 is the Answer

- IPv6 is READY, HERE and TODAY !
- Reliable technology, plenty of benefits, business opportunities, for everyone.
- A matter of evolution, that's the KEY.
- We need it before end of 2002 !
- Telco's should support it natively, in core networks, before end of 2003

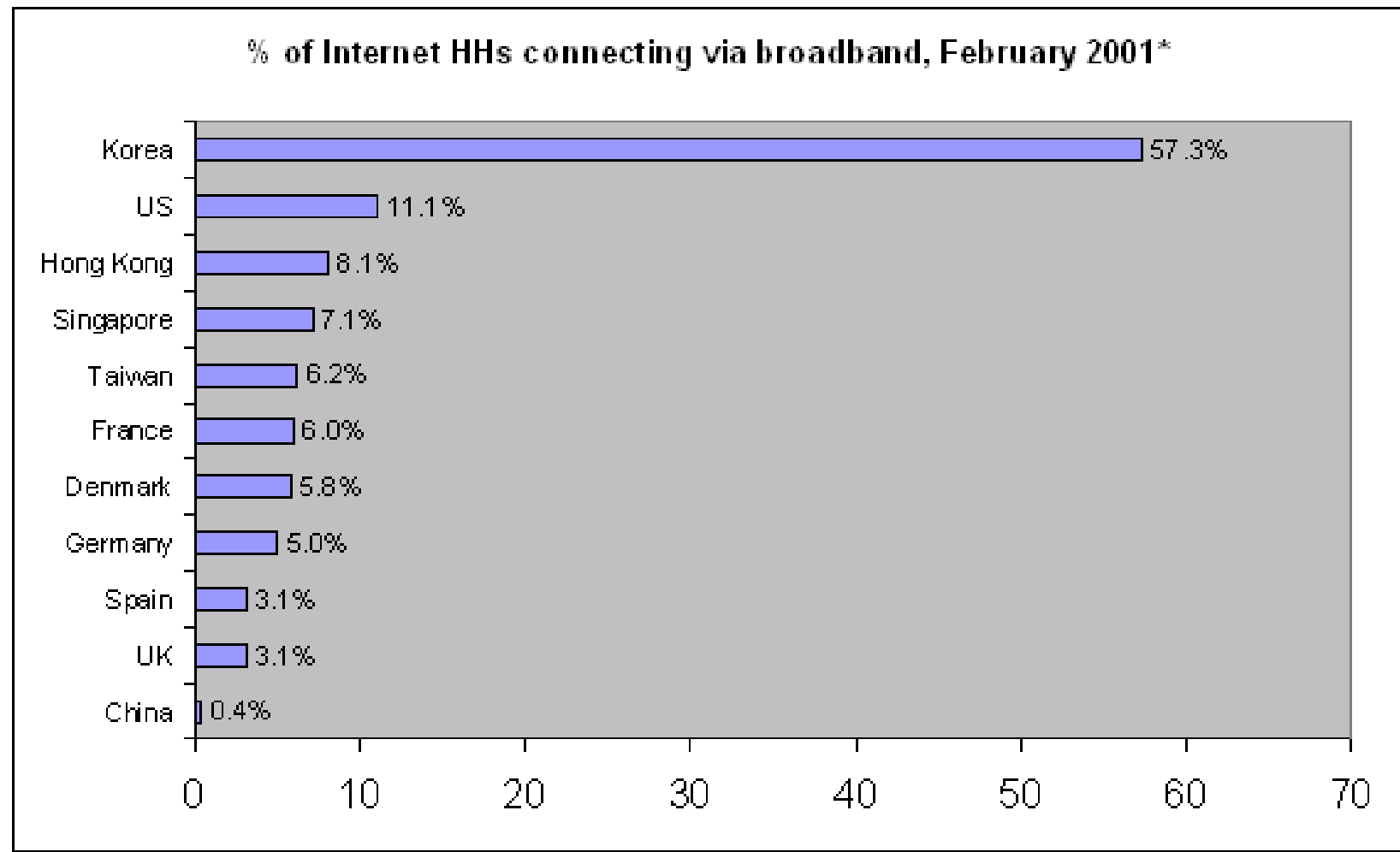
Now, how to ?

- Speed up projects/proposals with “IPv6 targets”, within the legal rules !
- Create, 100% funded, native IPv6 networks
- Mandate IPv6 in any network capable device before end of 2002
- Mandate end point for IPv4 on public, government, academic/research networks: non later than end 2003
- Fiscal support/funding for these targets !
- Fiscal support/funding for UMTS with IPv6
- Fiscal support/funding for content providers

ISDN Internet Access



Broadband Internet Access



Broadband Access Distribution

Broadband distrib. Country	Cable %	Satellite %	ADSL %	T1/Leased line %	Total broadband %
Korea	18.6	0.1	38.6	0	57.3
US	7.6	0.5	2.8	0.2	11.1
Hong Kong	6.0	0.9	1.2	0	8.1
Singapore	6.6	n/a	0.5	0	7.1
Taiwan	3.5	0.1	2.6	0	6.2
France	4.0	0.3	1.7	0	6.0
Denmark	3.4	0.0	2.4	0	5.8
Germany	2.7	0.1	2.2	0	5.0
Spain	1.8	0.2	1.1	0	3.1
UK	2.3	0.3	0.5	0	3.1
China	0.2	n/a	0.2	0	0.4