Addressing the Barriers to IPv6 Adoption – Lessons Learned & Open Discussion

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Lessons Learned During the Project

- A Discussion of Key Lessons Learned
  - During the Research Phase of the Project
  - During the Workshop Phase of the Project
- Food for thought
- Recommendations for Action to ISA^2

Lessons Learned from Research Phase

- There are some pretty clear lessons learned from the research phase of this project
  - MS public administration adoption is relatively low
  - If there is growth, there is evidence that most of the growth is organic (for instance, dual-stack implementations
  - “One-size” definitely does not fit all – and multiple reasons for this (government organization, government networking, government size)
  - Many MS are not doing anything – no projects/planning
  - In other states, momentum that was there previously has evaporated
  - Strong correlation between IPv6 deployment in the public sector and in public administrations
  - IPv6 Task Forces are now largely inactive

Other Observations from Research Phase

- The nice thing about the research phase of the project is that it is purely data driven
- Stakeholders in the IPv6 public administration ecosystem
  - Government (direct link to successful implantations when a ministry level or equivalent)
  - Task Forces (mostly inactive today, some exceptions)
  - R&D Research Centers (not very successful)
  - National Regulatory Authority (often not successful, but some exceptions – Sweden)
  - Central authority (mixed results)
- Clear Enthusiasm 4-5 years ago, but that level of interest in IPv6 in the Public Sector has not been sustained

Key Initiatives Identified in the Research Phase

- Some member states have taken action on their own
  - Procurement – a positive and oft-used measure, but limited in scope (needs “enforcement” and utilization)
  - Training (more developed than procurement, but less efficient so far)
  - General information
  - Profiles for acquisition and transition (very impressive in some MS, but hard to keep current)

Key Discoveries in the Workshops

- MS had the chance to directly comment on their experience with IPv6 deployment in public administrations
- Key themes:
  - Momentum has not been sustained
  - Some MS simply have no interest
  - Different MS size/organization leads to very different approaches
  - Leadership is difficult to find and nurture – but is needed
  - Some MS simply do not / cannot abandon IPv4 – even in new projects
  - Disconnect between political agendas and technical agendas
  - Budget and resources are often identified as key challenges

Concrete Recommendations from Workshop I

- Workshop I identified some clear recommendations
  - Member States should remain in contact with their national Internet industry
  - Member States should share addressing plans and strategies with other Member States
  - There needs to be a mechanism developed for Member States to engage in discussions on IPv6 deployment issues
  - The priority of IPv6 in ISA2 should be raised via its interoperability requirement
  - Motivations for IPv6 deployment should be documented
  - Member States should have a single focal point for IPv6 issues

Concrete Recommendations from Lisbon Workshop

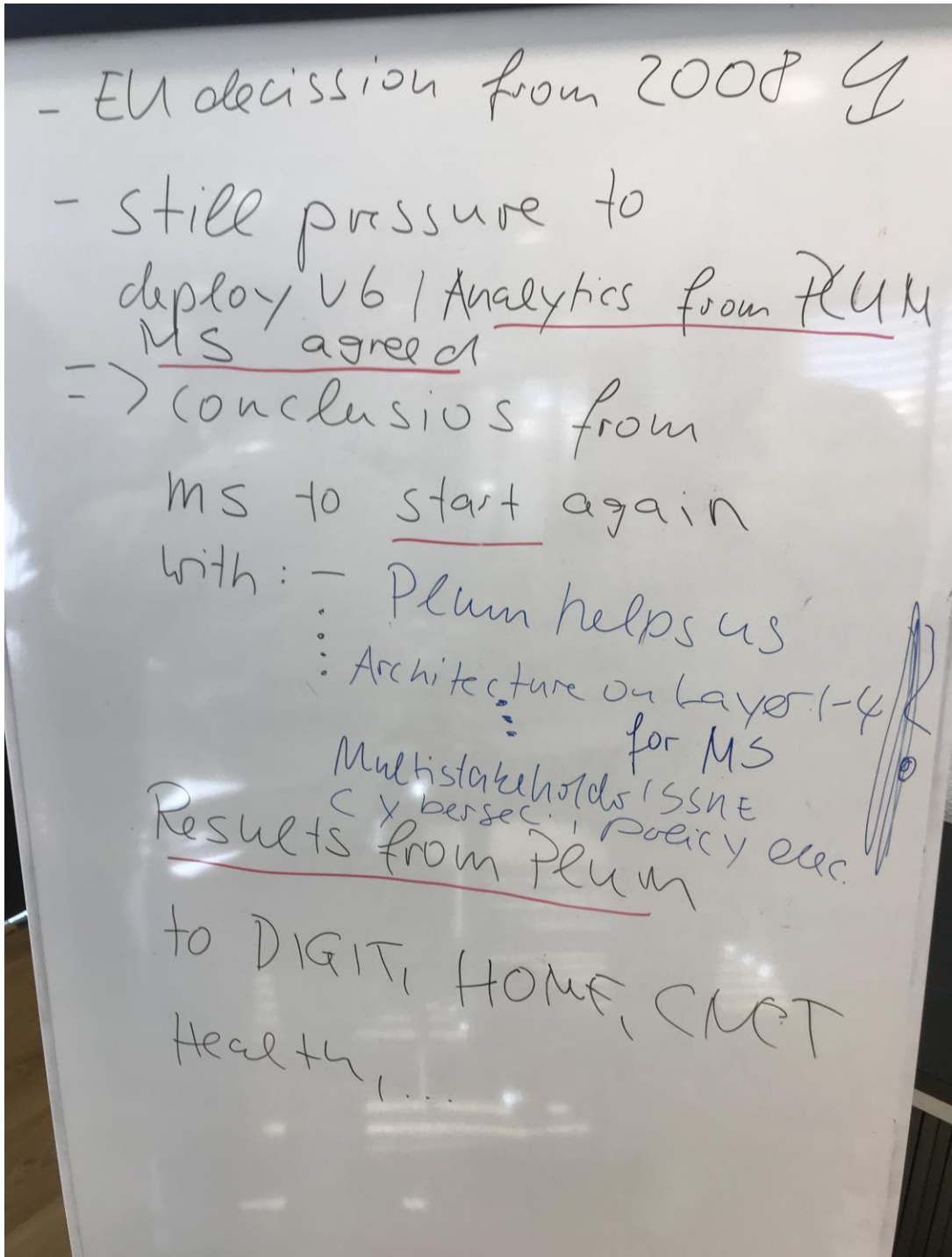
- Technology Transfer Workshop focused on an older EU Communication
  - It was noted that in 2008 there was a “Communication” (#313) that set targets for Member States to implement IPv6 with a goal of 25% of the traffic being IPv6 by 2010.
  - The workshop talked about strategies for documenting the participant’s ideas and then presenting it to the Commission.
  - In particular, a document such as the Communication might be recreated and re-sent.

Other Observations from Lisbon Workshop

- Technology Transfer Workshop also discussed
  - Market dynamics
    - Some participants thought market forces will address the IPv6 transition problem in an organic, evolutionary way in the next 5-10 years
    - Other participants felt that market forces would be too slow to drive real change
  - There was discussion of the unintended consequences of IPv6 deployment in the private sector.
    - One participant talked about the impact of NATs
    - “It’s literally at the point where applications aren’t working on a daily basis, requiring individual fixes.
  - There was also a discussion of how ISPs affect IPv6 deployment in public administrations

A Remarkable Output

- EU Decision from 2008
- Still pressure to deploy v6 / analytics from Plum / MS agreed
- Conclusions
- MS to start again
- With – Plum helps us
- Architecture on Layer 1-4 for MS
- Results from Plum to DIGIT, HOME, CNCT, Health, etc.



Some Observations from Investigators

- Plum has been talking to EU administrations about IPv6 for more than a year
- Observations:
  - There is no “EU wide” IPv6 implementation plan – there couldn’t be
  - Market forces are likely – in the longer term – push toward IPv6 deployments
    - But, what about now?
  - Member states face inertia or disinterest in IPv6 adoption
    - Contrary to a few years ago
  - IPv6 deployment in public administrations is not a technical issue
  - The disconnect between political objectives and technical objectives and expertise has to be solved at a national level, not a European level
  - Two years from now, how will anyone know if things are getting better

Final Thought Before an Open Discussion

- What should Europe do?
  - IPv6 is a strategic priority but IPv4 will be with us for a long time
  - Coordination of information, actions and efforts between MS?
  - Re-issue targets in a stronger form than a “Communication?”
  - Measure deployment again at a later date to see how deployment is improving?
  - Provide direct assistance to MS for addressing plans, transition plans?
  - Heighten the priority of IPv6 in ISA^2?
  - Fund a central, ongoing resource for IPv6 coordination, training and support?
- A key problem . . .
  - MS would like to have help, but that assistance is different depending on the MS requirements
- “digitalization” seldom impacts infrastructure except in “accidental” or “unintended” cases

Now, An Open Discussion

- What are your thoughts?
  - What concrete action should the Commission take?
  - Are the lessons learned about IPv6 Deployment in Public Administrations largely correct?
  - Are there things you would like to add or change the emphasis?
  - What is the next step that you would like to see?
    - By the Commission?
    - In your own country?
  - Any other comments?

Questions?