

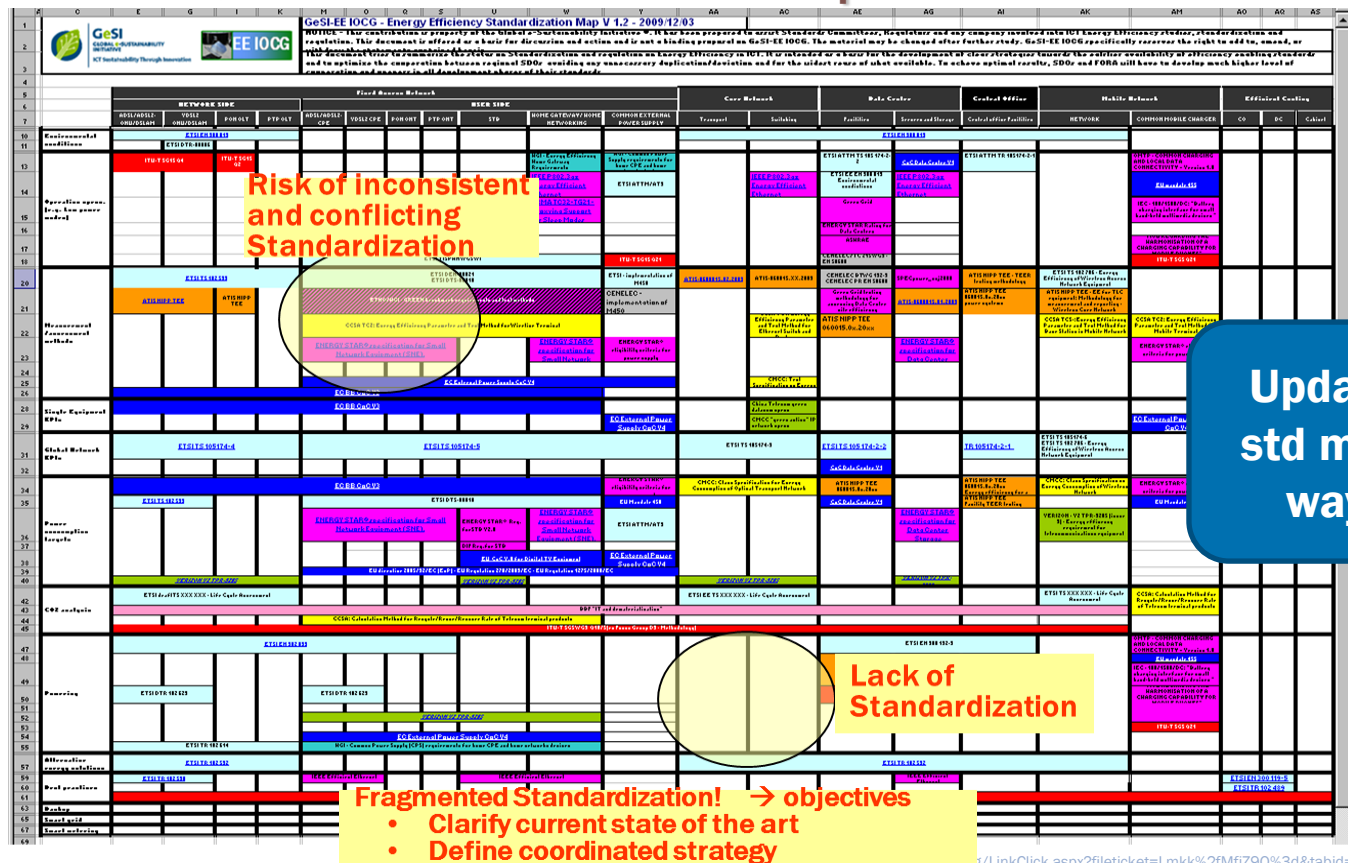
**IEA/4E/SEAD/DECC Workshop on the G20 ENERGY EFFICIENCY ACTION PLAN:
Networked Devices, 20 January 2015, Paris**

Energy efficiency in networked devices Products standards and protocols

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Standardization → an unavoidable step ... but ...

GeSI EE IOCG Standardization Map – December 2009



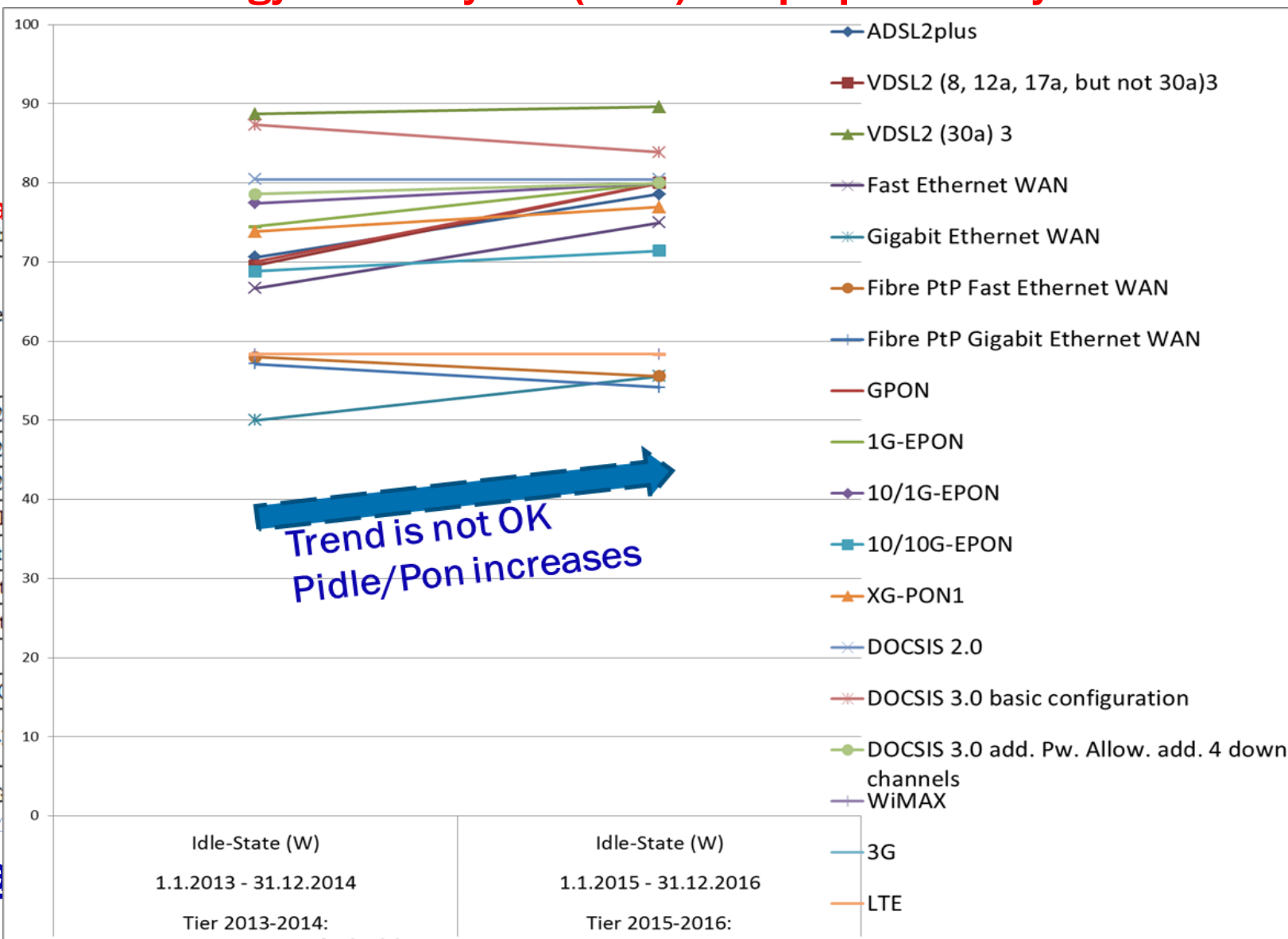
Standardization → - only on few areas and not synchronized among SDOs
- fragmented/with gaps and overlaps

Real and coordinated action WAS (and IS) still needed

Standardization

- **Few actions**
- **Focused on “static”, single equipment efficiency**
 - While networked equipment consumption depends on all other elements
- **New opportunities to reduce consumption through:**
 - **“Dynamic” and network wide optimization**
 - “connecting the dots”
 - **Using the power of the cloud**
 - proxying/mimicking functions into the cloud
 - **SDN (risk/opportunity)**
- **These are challenging topics that need:**
 - **Clear objectives and will**
 - **Engagement of industry**
 - **Cooperation of research and universities**
 - **Connecting international research projects with standardization**

“Static” energy efficiency and (work)load proportionality



“Dynamic” optimization

- **Some good initiatives have been accomplished:**
 - **Energy Efficient Ethernet (IEEE)**
 - **Proxying support for sleep modes (Ecma)**
 - **Universal mobile charger (ITU and IEC)**
 - **Universal power supply (ITU)**
 - **Green abstraction layer (ETSI)**
- **Other are ongoing**
 - **“Improvement of the energy efficiency in networks” (ITU/ETSI)**
 - **...**
- **Problem**
 - **Very slowly implemented**

Standards and protocols

- **Voluntary initiatives have been very successful (Energy Star, EU Codes of Conduct) ...**
- **... labeling could play a role ...**
- **... but efficiency for networked devices need more efforts**
- **Within standardization:**
 - **The perception is that energy efficiency is not a real and urgent need**
 - **more like a “nice to have” than a really strong requirement**
 - **There are still doubts it could:**
 - **reduce quality of equipment**
 - **worsen the user experience**
 - **hamper innovation**
- **Meanwhile market competition is on “peak” functionalities and time to the market**

Standards and protocols

- **A quantum leap is needed**
- **Stakeholders have to be convinced that energy efficiency is a priority (and means business)**

Government and Regulators need to drive the game directing standardization priorities

Today in standardization, they are only participating to part of the ITU activities

- **One of the schemes that look very effective in driving energy efficiency in the energy sector are the “with certificates”**
 - **In Italy they are applied to ICT too**
 - **Such experience could be well extended**

Thank you

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