



5G-ENSURE

(Project Number— 671562)

The importance of cooperation

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5G-ENSURE Collaboration ?



Project active since 7 months

5G-PPP WGs

- Architecture (Mats Näslund)
- Network management & QoS & Security (Felix Klaedtke)
- SDN (Olivier Choicy)
- Security (P.Bisson & JPh Wary)
- Cross-project co-operation on use cases (Linas Maknavicius)
- Vision (Stephen Phillips/ Mike SurrIDGE)
- Pre-standards (Paolo de Lutiis)

But is it sufficient ? or do we need more area to discuss and challenge new concepts and proposals ?



5G-new security challenges and concerns

- o *Network softwarization*
 - o *connected industries*
critical infrastructures → critical services delivered over 5G networks ?
 - o *concept of trust → concept of liability ? liability between parties ?*
 - o *What is a trusted software ?*
 - o *a software signed ? a signed software ? is it sufficient ?*
 - o *a software tested by a tool and signed by a third party ?*
 - o *is DevOps(1) approach compatible with network equipment softwarization delivery ? vNF ? for SDN controller ?*
 - o *How could we trust a slice ? a vNF ? an orchestrator ? a SDN controller ? a control plane ?*



5G-new challenges and concerns

- *New concepts of liability chains ?
monitoring and identification of each liability level for every technical segments/components used and needed to deliver a specific service E2E ?*
- *5G is associated with virtualization and slicing concepts*
 - *what is a slice ?*
 - *how it is isolated ? how could we prove it to a customer ?*
 - *how to chain slices ? and propagate Trust or Liability ?*
 - *who is responsible ? and what if, if isolation is broken ?*



5G-new challenges and concerns

- *what is network sovereignty ?
who manage what in a 5G network ? who will be liable for damage ?*
- *how to warrant to an operator controls over its own infrastructure (HW and SW) ?*
- *Is slicing concept compatible with Net Neutrality ?*
- *Are existing 5G telecommunication network concepts compatible with existing regulation ?*
- *How to combine new needs regarding Citizen Safety and Protection with use cases requesting to decrease security of access control to 5G Infrastructures ?*



5G-new challenges and concerns

- more cooperation needed regarding security topics
 - A unique entity will not have the solution and could not impose its view to the global ecosystem
- unification of efforts and resources needed to address 5G complexity (cross evaluation / pro and cons / impacts investigation on the whole ecosystem)
- security landscape and research roadmap needed at European level.

5G Ensure

5G Enablers for network and system security and resilience



5G-ENSURE: <http://www.5gensure.eu>



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The 5G Infrastructure Public Private Partnership (SG PPP)

