

## Working Group 2

levels of « quality of services » ( QoS)

Convenor : Thierry Fernandez /LEA

## Objective and representative

- **Objective**
  - to establish and define the different levels of quality of services adapted to user needs , per type of application.
- **Representative**
  - Equipment manufacturers
  - Internet Access suppliers
  - Multimedia suppliers
  - User representatives ( Associations )

## Procedure

1. Definition and modelisation of required applications and quality levels
2. Définition of a simple measurement protocol applicable to an electrical installation
3. Correlation between measured parameters and eligibility
4. Recommended solutions

## Definition and modelisation of applications and required quality levels of services (1/2)

- Definition of applications
  - ‘mature’ services
    - Domotic,
    - Internet Access,
    - SD and HD flux spreading
  - Growing , increasing customer needs
    - Multiplication of connected equipments on the same network,
    - SD, HD Multi-flux
    - Mutliple of flux sources on the RLD (routeur, PVR,...)
    - IP Voice
    - Networking games ...

## Definition and modelisation of applications and required quality levels of services (2/2)

- Modelisation
  - **Definition of scenario of representative service tests :**
    - Contain : loading, audio and video streams, applications, games ...
    - Servers: to modelize a distant or local server
    - Equipments : media player, IP phone , network PC, game station...
  - the same service can be tested on différent installations.
  - On a considered installation , a service can be evaluate depending on whether it is :
    - Non-fonctionnal,
    - Degraded fonctionnal
    - Acceptable fonctionnal,
    - Completely fonctionnal

## Definition of a simple measurement protocol applicable to an electrical installation (1/2)

- Objective

To define and implement a simple measurement protocol which enable to determine if a PLC network is able to support a type of service .

- Procedure

To consider an installation on which different service performances have been evaluated

To identify more simple parameters to measure or to predict so as to establish a correlation between these parameters and the eligibility of a service

## Definition of a simple measurement protocol applicable to an electrical installation (2/2)

- Exemple of parameters used
  - Characteristics of the installation (power, equipments, topology, mono-/tri-phased...)
  - Use of physical measures (noise , attenuation...)
  - Use of network statistics (latence, taux de perte de paquets, bande passante estimée...) obtained from PLC adaptors of defined technology

## Correlation between measured parameters and eligibility

- To display a correlation based on eligibility and performance measurements
- To define practical rules of eligibility of an installation for a given service

## Recommended solutions

- According to the :
  - measured parameters
  - the non eligibility of an installation for a given service

We propose to establish recommendations to improve the situation :

- either by an adaptation of the service parameters ( error correction , buffer sizes ...)
- or by an adaptation of the installation (filters , topology,...)

## Participation

- AFUTT ( Telecom users Association )
- Free - Telecom Operator ( under consideration )
- Promotelec
- Canal Plus

## Leading of the group

- Convenor
  - Thierry Fernandez / LEA
  - Tél. +33 6 60 42 37 44
  - e-mail: [thierry.fernandez@leacom.fr](mailto:thierry.fernandez@leacom.fr)
- Logistical support
  - Secretariat : [adamblin@plc-ready.org](mailto:adamblin@plc-ready.org)