# GLIF Control Plane Working Group Meeting
# 8-9 February 2006, New Mexico

## Introduction

After an initial joint session with the Technical WG, the second Control Plane was opened by Gigi, who welcomed the participants and bashed the agenda. The control plane meeting focused on network service definitions and network element descriptions using RDF (Resource Description Format).
Service definitions allow to specify the characteristics of a service in order to understand if a network is able to support such a service. A network element description allows to specify network interfaces in order to connect one interface to another.

## Practical demonstration of Network description
## Andree Toonk - SARA

Andree presented the work done at SARA, based on RDF to describe network elements and to allow for discovery path.  Example of RDF network descriptions and how the various elements in a network are physically connected to each other were shown during the presentations.
The RDF specification of network elements can be used to create a graphic representation of the network, transforming the RDF file into a .dot file as input for a graphic programme.
Andree also showed how in SARA SPARQL queries are used to extract data from switches (for instance the connected interfaces), which in combination with the .dot file, makes it relatively easy to create a graph that represents the network.  The further step is then the use of specific algorithm (for instance Dijkstra) to determine the shortest path between two points in the network. There was a lot of interest for the tools that SARA has created, also related to the possibility of using them to determinate the shortest paths between two different points belonging to different networks.

## What is the control plane?
## Jeroen Van de Ham - UvA

Jeronen talks focused on of what control plane is and on service definitions. Due to the lack of automatic procedures, users require paths calling network operators. In case of non-expert users it's up to the operator to figure out what path the users need and how to provide it, which can create misunderstanding between the users' request and the operator interpretation.
Work has been done to automate light-paths, mainly limited to intra-domain.
The crucial point to automate light-paths is that information about the topology of the network and the services that can be offered is required.

## Common Service Definition
## Jerry Sobieski - Mid-Atlantic Crossroads

Jerry's talk focused on common service definition and why they are important to specify the service characteristics as experienced by the consumer. Jerry also stressed that the way the service provider decides to construct the service infrastructure is not part of the Service Definition.

In many cases the network is available and has some capabilities, but it is still not easy to understand what type of services a network can provide.

The parameters used in a server definition are very much depending on the domain. To date there is no agreement on what parameters are mandatory, but some activities are ongoing, such as between HOPI and Dragon, who have agreed on a common understanding.

The three key players are: users who request a service, the technical requirements to get a good service and what a network can deliver.

At the moment there is no standard way to write service definitions, but XML seems like the best candidate and some examples of XML-based service definitions are available on the dragon web site.

The presentation trigged a lot of discussion to understand what elements should be included in a service description and how to match the users' service definitions with the technical specifications.  It was agreed to start some work to standardise service descriptions and for this reason liaison should be sought with other groups working on the same fields.

The picture below summaries the flow: a user requests a service, a translation of the service should follow to describe the technical requirements and the service description would codify these requirements.
The final point is how service definitions definition is used to set up an end-2-end definition.
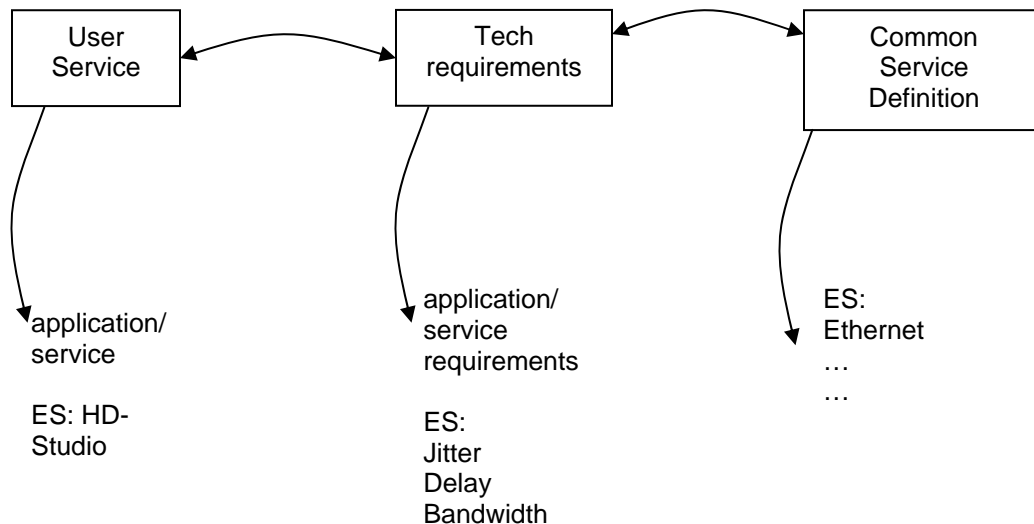


**ACTION**: Licia and Gigi to contact Dimitra (chair of the GGF GHPN working group) to ask her about a match for users' demand and the technical definitions.
**ACTION**: Having agreed that common service definition is an important aspect for inter domain definition, it was agreed to put together a list of information which is critical when crossing domains. Gigi will coordinate this.

**Control Plane versus Management Plane
Gigi Karmous Edwards – MCNC**

Gigi gave a brief talk about the difference between Control Plane and Management Plane to be sure to have common understanding.
It was agreed that control plane is about distributed intelligence to talk to various domain. Management plane is more a centralised application and can communicate to the network elements to create an end-2-end connection.


## Summary of the actions

**Action0206-01**: Licia and Gigi to contact Dimitra (chair of the GGF GHPN working group) to ask her about a match for users' demand and the technical definitions.

**Action0206-02**: having agreed that common service def is an important aspect for inter domain definition, it was agreed to put together a list of information which is critical when crossing domains. Gigi will coordinate this.

**Action0206-03**: Licia to look how google-map API works based on what done in tf-mobility.

**Action0206-04**: To look at advanced schedule versus on demand and to look at scalable resource negotiation for the future.