

MileGate

MileGate is an IP-based multi-service next-generation access platform that can support you in expanding your network so that it is fit for the future. MileGate combines carrier grade broadband access, telephony and data interface in one single, compact access platform.

By using MileGate you can migrate whole or parts of your telecommunications network to the NGN. Expand your range of services to include new, high quality Triple Play and broadband business services, and continue to provide the range of traditional telephony and data services at the same time, without having to rely on two systems.

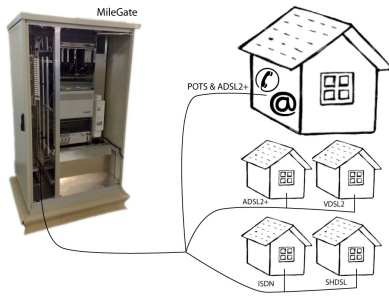


Illustration 1: KEYMILE MileGate

The system has one core unit and possibility for 20 other units with different interfaces such as Telephone, ISDN, ADSL2plus, VDSL, SHDSL, optical or electrical Ethernet. As an example the MileGate provides up to 960 xDSL or 456 COMBO connections (Telephone and ADSL2plus).

The MileGate provides already management possibilities such as command line interface, a proprietary configuration GUI, syslog or SNMP.

Management Interfaces

We had to evaluate the two new interfaces (HTML and Web Service) which enhance the manageability of the MileGate and veer(head) from proprietary management interfaces towards standardized interfaces.

HTML

A n interfaces for the Milegate accessible by an Web Browser controlled by a human (human machine interface)

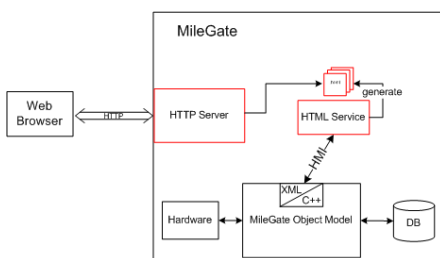


Illustration 2: HTML Interface

To be accessible by humans, the MileGate should provide HTML files generated at runtime. The user is able to connect the MileGate with a web browser. For this service, we want to study the feasibility and suggest how this task could be implemented.

Resolution/Comment:

We studied the feasibility of this service according to the constraints of the actual system and mentioned the problems and mitigations. Our suggestion contains the function structure, mechanisms for the major elements and a prototype GUI.

The user interface has a strict separation between the navigation- & function structure, which is pre-generated and the content elements which are requested on click through a XML dialog with the MileGate system.

The major reasons for this separation are the memory limitation on the embedded system and the dynamic reaction on configuration changes .

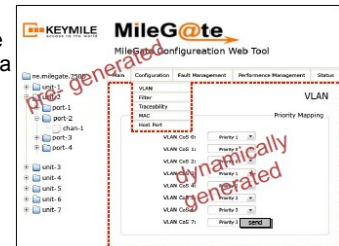


Illustration 3: GUI prototype

Web Service

We describe a standardized interface for the MileGate accessible by an client application (machine machine interface) over the network.

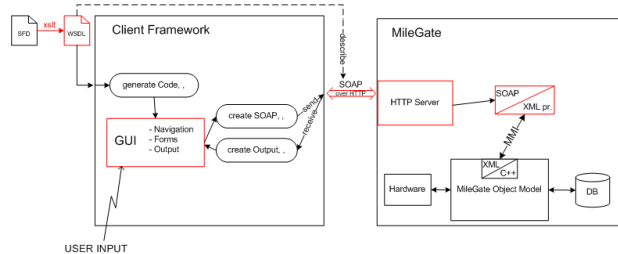


Illustration 4: Web Service Interface

The messages of the type SOAP (transported over HTTP) are treated within the embedded HTTP server of the MileGate and afterward transformed into the proprietary XML format which is the only accessible interface of the MileGate.

We use the Web Service Description Language WSDL to describe this interface in a standardized way and offer with it the possibility to the end-user to integrate it in his management application.

Resolution/Comment:

The interface between Client and MileGate had been described under the terms of the WSDL recommendation.

With the description file, a client framework automatically generates the code for the use of the functions and exchange messages to communicate with the MileGate. Additionally we studied other Web Service concepts according to the requirements of KEYMILE and the possibilities for the further development of this service.

Conclusion

The complex structure of the MileGate and the huge amount of constraints contributed this project to a very instructive one in a wide range of topics such as embedded systems, management interfaces, network access platforms or project work to cite some examples.

Both services were interesting to evaluate and could offer an added value for the management of the MileGate.

On one hand, HTML pages are accessible very easily with browser and do not necessitate any installation, on the other hand, Web Services provide the ease of integration into any management system.

Web Services and its use will grow in the near future and the even more interesting Web Service concepts will be developed and standardized.

