

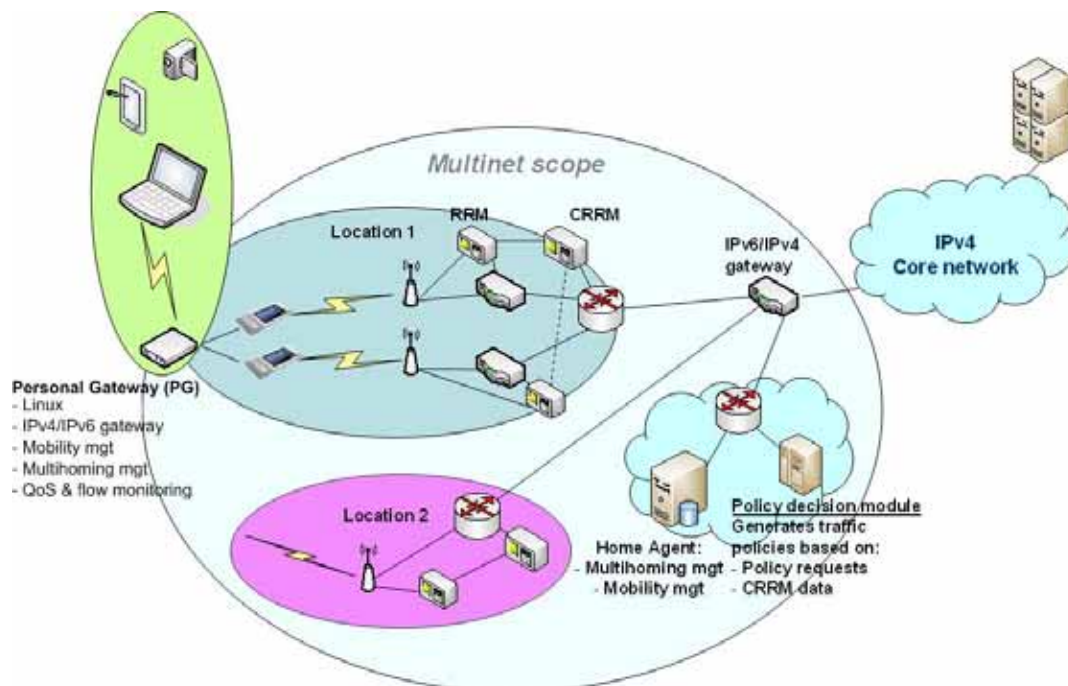
MULTINET Newsletter

March 2007

Welcome to the second issue of the MULTINET newsletter. In this occasion and when the time planned for researching is nearly to conclude, the MULTINET consortium wants to present all of you the main achievements and technological innovations carried out up to the moment. This newsletter summarizes the results of the project from the perspective of the three main components of the MULTINET system: policy enforcement, network selection algorithm and measurement and estimation system. At the beginning, the designed reference architecture is shown to continue highlighting the outputs of the WP300, WP400 and WP500 and ending with an explanation of the future work to develop inside the project to achieve the objectives of MULTINET project.

Enabler for Next Generation Service Delivery

MULTINET project is intended to bring advanced connectivity functions to next generation services. The MULTINET communication system will be capable of providing the network and application functionalities so that multiple wireless access networks can be seamlessly and simultaneously handled.

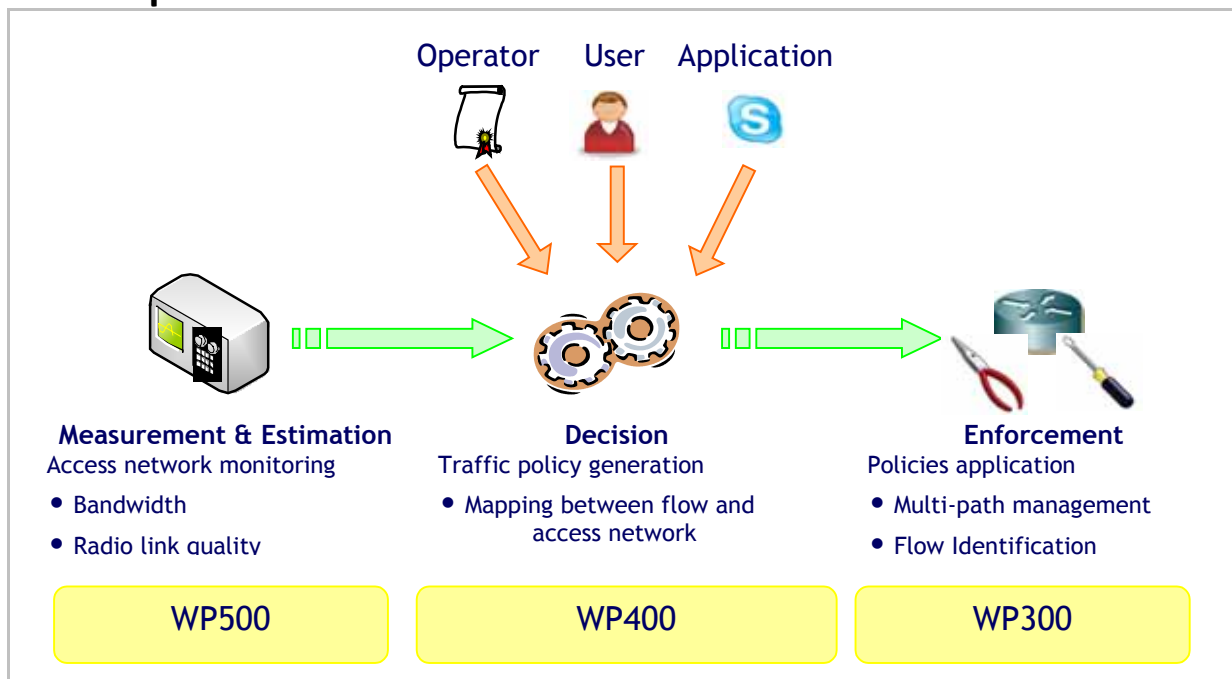


MULTINET Reference Architecture (© MULTINET consortium)

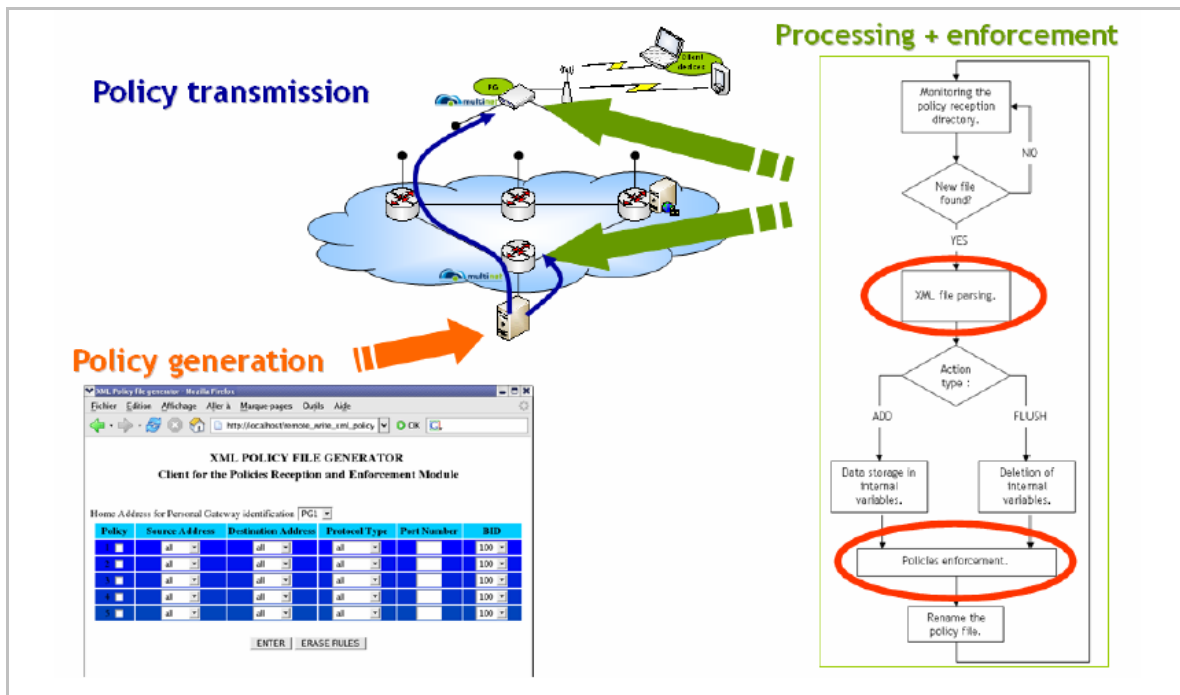
The MULTINET system is composed for three main components:

- PG- Personal Gateway is a multimode device that offers transparent Internet access to the user devices by aggregating the advanced Multinet connection mechanisms such as the simultaneous use of many access networks and handovers from one to another network.
- CRRM- Common Radio Resource Management monitors the performances and the load of the access networks and sends these measurements to the NSA.
- NSA- Network Selection Algorithm is the intelligence of the system, determining the best access network for a given application and generating the policies to manage the session handover processes.

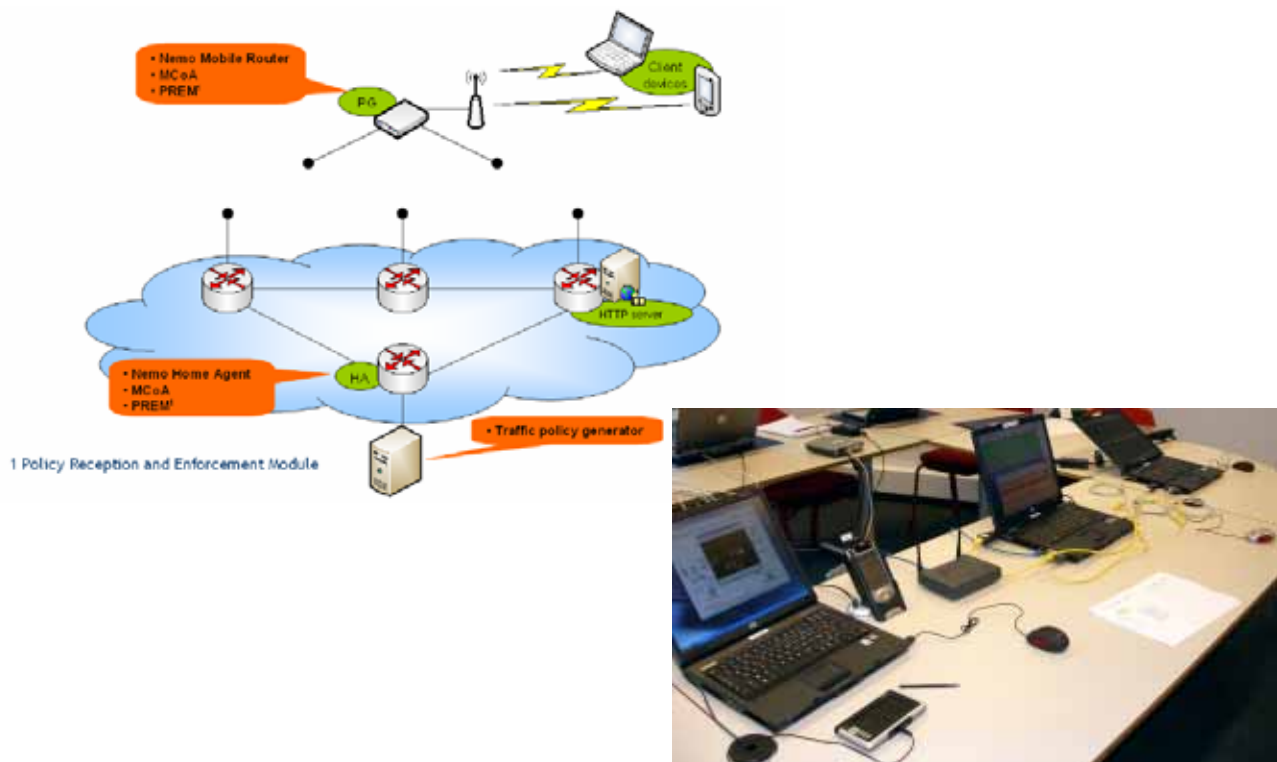
MULTINET in Operation



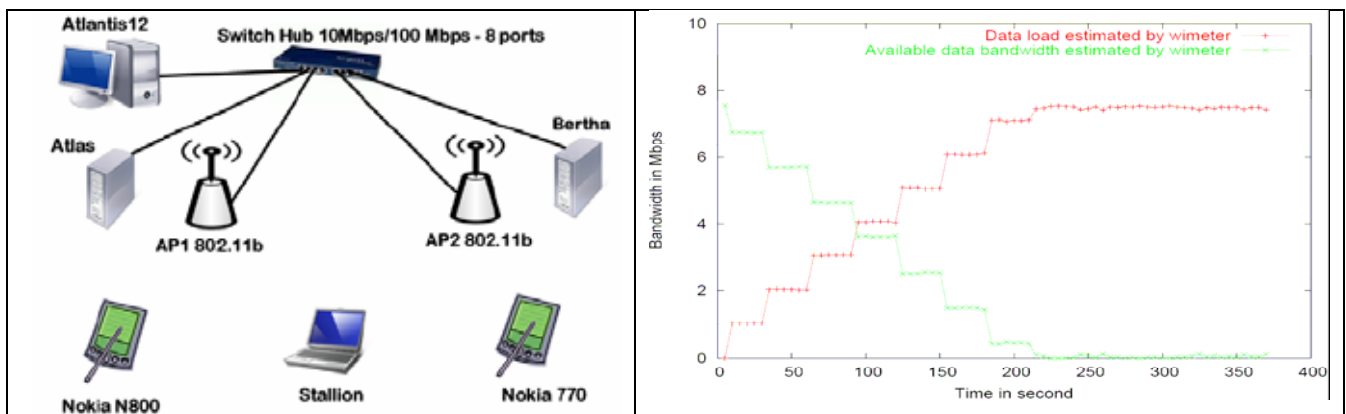
Up to now, the main R&D activities of the project have focused on the development of the individual components of the architecture. The MULTINET project has already demonstrated the individual operation of a NEMO Multihoming solution with no specific requirement for the end-user terminals and applications remain unmodified, the operation of a measurement & estimation system and static policy generation mechanisms.



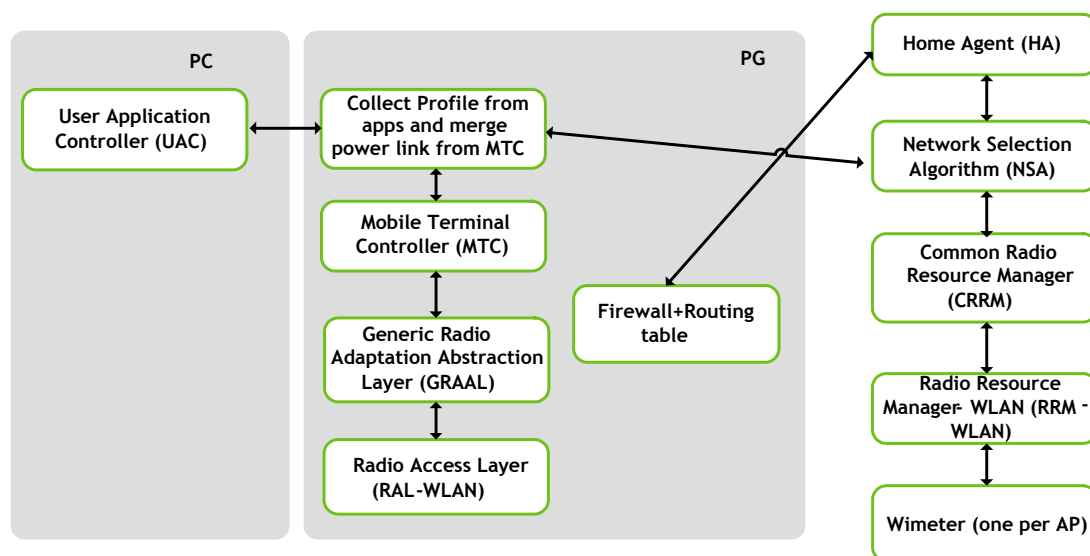
In March 2007 it was possible to present the operation of the Figure above in a static configuration. Successful traffic flow handover between two available interfaces was achieved in a multihomed nested network with streaming video applications.



Estimation of the available bandwidth in the system was obtained through the WiMeter technique.



MULTINET Final Developments



After having developed the individual components, which allow static/manual operation of the MULTINET system, the work now focuses on the definition of the necessary elements facilitating dynamic system operation. Thus, a common MULTINET data model and the NSA are being further developed to allow exploitation of multi-homed flow handover and available bandwidth operation, being optimum algorithm parameter selection one of the main targets of the research.

NSA represents the intelligence in the MULTINET system and is related to the self-organisational aspect of the network management strategy devised as the enabler for next generation service. In the context of MULTINET, NSA is the mechanism selected to determine how the multihoming strategy could be best exploited. This means that NSA makes decisions in terms of assigning flows to particular interfaces. It is located on the core of the system and interacts with all the functional blocks included in the system. The NSA is divided into NSA heuristics and communications modules. The first one is responsible of the part of the

algorithm that must be developed to take the decision and the second one is responsible of the functions required for sharing all the information, including all the inputs and outputs of the algorithm.

More information on MULTINET

MULTINET has been and will be present at a number of events. This Section of the newsletter informs the interested reader about additional sources where more information can be found about the MULTINET project. MULTINET presented the architecture at the WWRF meeting held in Heidelberg with very good response from industry; and a paper has been produced with focus on the available MCoA approaches and the selected one. This issue has been dealt with further details at the last VTC conference held in Dublin. The issue of bandwidth estimation will be address in a paper to be presented at the next IST event in Budapest. MULTINET has also participated in the last BBEurope conference with a poster and the consortium will be present in the next eChallenge event focusing the discussion in more business-related aspects of the system.

Future work in MULTINET

From now to the end of the project, the MULTINET consortium will work in the integration of the different modules to develop the MULTINET prototype with the objective of testing it at the end of the year in three different platforms. The results of these tests and the integration will be presented in the following MULTINET newsletter.

MULTINET Information

Project Duration:

January 2006 – December 2007

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MULTINET Consortium

The logo for THALES, consisting of the word "THALES" in a bold, blue, sans-serif font.The logo for WIND, featuring a stylized blue and orange wave above the word "WIND" in orange.