# Transcript of a Radioshow on Akogrimo, Broadcasted at 1 April 2006 in Portugal on Station TSF Programme Eureka

Journalist:
It's already used by scientists but now the ambition is to place grid technology to the service of all of society. With financing from the European Union, the Akogrimo project studies this computation technology that allows access to information and processing resources in a distributed manner.
Rui Aguiar, from the Institute of Telecommunications of the University of Aveiro, evaluates the future potential benefits of this grid system. One of the applications is medical assistance.

Rui L. A. Aguiar:
The doctors collect information from x-rays, CAT scans, ultrasonographs and with all that information they are able to make a better diagnosis.
Combining all this information can be quite complex, but with grid technology, it is possible to collect and process this information very quickly.

Journalist:
A patient's clinical history is distributed among various institutions; with grid technology, maximum information is available to a doctor wherever he may be located.

Rui L. A. Aguiar:
A paramedic in an ambulance, accessing the clinical history of the patient via mobile phone; a doctor who was called in an emergency because the patient is having a stroke; or a doctor in the operating room who already has all the hospital resources ready. All these cases have very different requirements for visualisation of information, for example. Therefore, communication requirements will also be different.
Grid technology, which we are studying and enriching, enables choosing at each moment the best possible answer so as to preserve the life of the patient.

Journalist:
Akogrimo's promotional video[1] shows also a special mobile phone. Rui Aguiar tells us that the device has special sensors incorporated that allow, for example, retrieving the heart beat of the patient.

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[1] See http://www.akogrimo.org/modules.php?name=UpDownload&req=viewdownload&cid=4, video "Akogrimo eHealth Scenario".

Rui L. A. Aguiar:
Basically it's like walking with a permanent medical monitor. When a crisis occurs, the mobile phone acts like a medical monitoring device and sends that information directly to the proper clinical centres.
In this case the mobile phone sends information through GPRS, which is a commercially available technology. The processing of that information is done with the grid technology we are developing.

Journalist:
Grid technology can also be used in distance education.

Rui L. A. Aguiar:
It's quite common not being able to use all the information at our disposal in an instantaneous manner; grid technology allows composing information very quickly. Therefore, a teacher can reconfigure his classes and the information he is providing to the students in a dynamic manner, as a consequence for example of the questions he is receiving from the students.

Journalist:
The professor from Aveiro's university exemplifies some of this technology's advantages in a catastrophe scenario.

Rui L. A. Aguiar:
If there is an earthquake, all civilian infrastructure collapses. Firemen, civil protection, hospitals, there is a very large number of variables that occur at that moment and make it a highly dynamical process: the number of beds varies, firemen are moved from one place to the other, ambulances get saturated.
Grid technology, in our project, for mobile environments, allows the maintenance of a fine-grained control over what is happening, while having an idea of the current location of entities and resources as well as their function at that specific moment.
It allows the collection of this information and processing it according to the scenario's specific requirements, so that, for example, an ambulance is diverted in two minutes to make the delivery of a particular patient, not to the hospital of Aveiro, but to the hospital at Coimbra, since at Aveiro there are no more beds available for that kind of injury.

Journalist:
Rui Aguiar reveals how this scenario would be feasible at a technological level.

Rui L. A. Aguiar:
[The scenario is feasible] using the cellular network that is available nowadays, plus so called appendixes at firemen coordination centres [and] hospital control centres; these appendixes don't have the limitations of mobile phone technologies and allow management of much more information.
Communication technologies, by themselves, may be our day-to-day technologies, but the services we make available through them, and the way they are integrated using grids are completely different.

Journalist:
When there are large quantities of information it is difficult to process them, using grids, this is done in a distributed manner. When resources are normalised, access is performed using standard interfaces that collect and integrate information in real-time.