GERYON Newsletter

Next Generation Technology Independent Interoperability of Emergency Services
http://www.sec-geryon.eu

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SEVENTH FRAMEWORK PROGRAMME

Welcome Letter

Dr Fidel Liberal (Project Coordinator)

Dear Reader,

I want to take this opportunity to welcome you on behalf of GERYON partners to the first issue of the GERYON Newsletter series. These newsletters have been conceived as a means for public dissemination of the GERYON project both from a technological and impact into society point of view.

In order to define the aim and scope of GERYON, **Convergence** is the first word that comes to my mind. Convergence in a broad sense, far beyond the techie buzzword but meaning a full amalgamation between two “untill now” separate worlds: emergency communication networks based on Private Mobile Radio systems and next generation general purpose cellular technologies. This isolation has led to multimedia capabilities and enriched services any common user enjoys in his/her cell phone not entering emergency networks. The main barrier for the adoption of these features is the lack of broadband wireless access due to special security and availability constraints of traditional PMRs.

The second word is no doubt **Uncertainty**. Nowadays there is a growing uncertainty about the near future evolution of emergency networks due to spectrum scarcity, digital dividend issues and economic crisis.

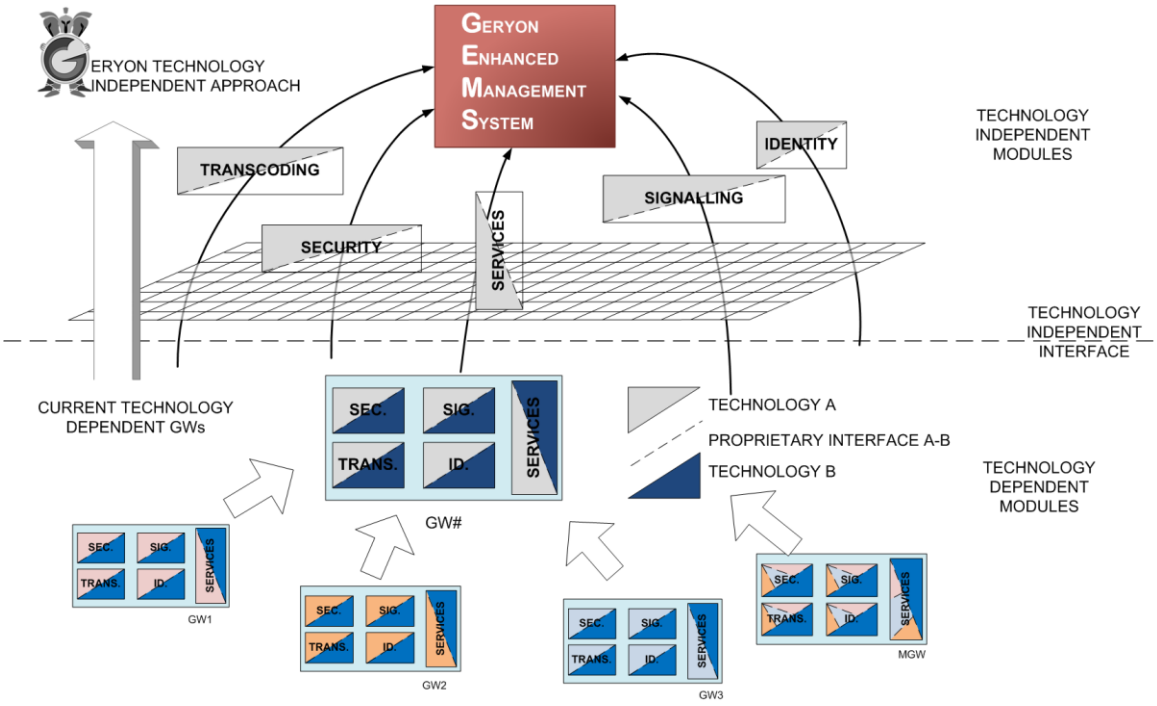
GERYON aims at facing this uncertainty by seizing the existing window of opportunity due to the rebirth of IMS as a predominant enabler for convergent future multimedia networks and the imminent deployment of commercial LTE networks.

I invite you to enjoy this exciting journey towards next generation emergency networks together with the GERYON consortium and recommend you to regularly visit our website www.sec-geryon.eu for news/links and communications.

Dr. Fidel Liberal, University of the Basque Country (UPV/EHU).

Project Overview

In the current digital world, users of first responder communication systems are aware of the benefits that the interconnection between different Professional Mobile Radios (PMR) and the integration of new advanced data services could bring to their professional sectors. Considering the current multimedia capabilities of both emergency and general purpose mobile terminals, it is just a matter of time before we see police or fire-fighter units transmitting vital image-based information in real time to central stations or to other mobile units in order to assure quick and expert responses to critical incidents. In order to satisfy this need for broadband data services, different PMR technologies have tried to improve data transmission capabilities. Unfortunately, however, interoperability between systems is largely based upon bespoke interfaces between specific systems (e.g. a gateway between a TETRA system and a LTE system).



From current gateways to GERYON technology independence focused approach

GERYON will provide a unified answer to the problems that system integrators must face when interconnecting different emergency networks by bringing together and deploying in a specialised manner the common technical and operational logic regarding Identity Management, Security, Signalling, Transcoding and enhanced emergency services. Instead of duplicating the same functionality in different gateways for each pair of technologies to be connected, GERYON will extract and unify the related management modules in a technology independent way and will provide mechanisms and interfaces for an easy deployment of new technology dependent interconnection gateways.

Project News

GERYON Kick-off Meeting – December 14-15, 2011, Bilbao, Spain

The kick-off meeting of GERYON was held at Science & Technology Park of Bizkaia, Bilbao, Spain, on 14-15 December, 2011. A total of 18 members across 7 project partners attended the kick-off meeting. Dr Fidel Liberal initiated the kick-off meeting with a presentation covering the aims, objectives and scope of the project. A wide range of interesting discussions followed this on various project aspects. Indeed, each project partner was allocated with a timeslot for presenting outlines of their work packages and discussing their approaches. All the project partners were satisfied with fruitful outcomes of the kick-off meeting which set various clear goals enabling the project to successfully take off. In addition to the kick-off meeting, another 7 project general meetings were also proposed to ensure the smooth running of the project, allowing seamless collaboration between all project partners and to solve any unforeseen project issues.

A friendly discussion between partners during the kick-off meeting

Deliverable submissions - February, 2012

The first two project deliverables, D1.1 – Project Management and Quality Assurance Plan and D7.1 – Dissemination and Standardisation Plan, were successfully submitted to the European Commission sensitivity board for reviewing. The D1.1 was lead by the University of the Basque Country UPV/EHU describing the project management processes and quality assurance that will be performed during the GERYON project lifecycle. While D7.1 was lead by the University of Plymouth and highlighted the project dissemination activities and guidelines for each partners to identify and exploit communication opportunities.

Meet The Consortium

The consortium for the GERYON project has been selected for the diverse and complementary expertise and skills that they collectively bring into the project. The consortium is a balance of commercial organisations in the research, services and consumer markets as well as research institutions and universities all of which have specific knowledge and experience relevant to the projects objectives.

This set of competencies would be difficult to achieve at the purely national level, as it is necessary to identify partners with the required combination of technical skills, industrial presence, relevant current products, end-user experience and access to relevant research networks.

The emerging marketplace will be delivered through a combination of well-established incumbent players and new emerging players. Again, the consortium has been careful to ensure that its partners include a balance between these two. Hence, the project has a strong SME presence of companies that are rapidly becoming the leading software infrastructure and advance service providers in the emerging wired and wireless broadband Service Environment. The scientific validity of the project work is underpinned by the commitment of a number of world-class academic research centres. This balance is reflected in the GERYON core team membership.

The partners of GERYON project have extensive experience into the participation and the management of international collaborative projects (EUREKA, ESPRIT, FP5, FP6, FP7) and some of the consortium members have already collaborated in the past with each other. It is expected that these factors will ease considerably the interactions among members.

The current project consortium consists of companies from Spain, Greece, France, and the UK. This geographically scattered consortium brings up a great opportunity to exchange knowledge and expertise among different countries, gathering the specific points of view of each partner to achieve a complete and useful set of results that can be transferred easily into the market. This creates the potential business and technical impact of GERYON solutions in and beyond Europe. The consortium is formed from the leading experts in all related areas of digital content service delivery and exploitation.

GERYON brings together SMEs like VIOTECH and Grupo CYS, commercial and public mobile network providers like COSMOTE and ITELAZPI, in contact with leading-edge academia and research institutes such as the Universities of the Basque Country, University of Plymouth and NCSR Demokritos. Thus, GERYON provides the opportunity for these organisations to work together to develop cutting-edge technologies and services for Europe and beyond.

Partner Spotlight

The Partner Spotlight section introduces project partners of the GERYON consortium in more details: the background of their organisations, their experiences and expertises, the role they play, and staff members from each partner. University of the Basque Country and University of Plymouth will be introduced in this issue while others will be covered in subsequent newsletters.

University of the Basque Country

The UPV/EHU is a teaching and research institution officially founded in 1985. The university employs over 7.000 people throughout 31 faculties and schools distributed in three campuses with over 50,000 undergraduate and postgraduate students. The UPV/EHU is the Spanish University offering the highest number of degrees, one third of these degrees having a quality mention from the Spanish Ministry of Education. UPV/EHU is not only one of the leading universities in Spain according to a recently published ranking (www.webometrics.info) but also one of the leading universities in the European area for the quality of its teaching, its commitment to continuous training and the excellence of its research, development and innovation. Since the first Research Framework Programmes, the UPV/EHU has been very active and has participated in over 40 projects from the Sixth Framework Programme (FP6), mainly in the Activity Area 3 (NMP) and Activity area 2 (ICT). Concerning FP7, up to the date, the UPV/EHU participates in 44 projects, coordinating 7 of them, with more than 13.5 million euro of FP7 financing.

In the project, UPV/EHU will be represented by the Networking, Quality and Security (NQaS) research group (http://det.bi.ehu.es/NQAS/) with premises at the Faculty of Engineering in Bilbao. Main UPV/EHU contributions to GERYON project will be focused on:

- Project coordinator and project management (leader of WP1).
- Leading the technical specification of GERYON modules/interfaces (leader of T2.5).
- Leading the orchestration of emergency services over heterogeneous networks (leader of T3.3, T4.1 and T5.3).
- Supporting the integration of system components (leader of T6.1) into the pilot network provided by the Basque Government / ITELAZPI.

Short profile of the staff members

Dr Fidel Liberal acts as Project Manager in GERYON project as well as main responsible of WP6 (Integration, Field Trials and Evaluation). He received his PhD in 2005 from the UPV/EHU. In 2002 co-founded a spin-off (Captiva Seguridad y Soluciones) devoted to security in computer networks. He led the project ADVISER II (Basque Government) and participated in Garcreth 2003-2006 (Spanish Ministry of Science and Technology) security projects. Lately he has been the technical coordinator of the UPV/EHU in FP7 ICT ADAMANTIUM (2007-2010) project.

Dr José Ramón Otegi acts as responsible of WP1 (Project Management) in GERYON project. He is a doctor in innovation project management and Master in Business Administration, with twenty years experience in the development and management of innovation projects for industry and local governments. He has participated as project manager in several European Commission projects and acts as external expert for IST/ICT programme since 1992. Important part of his work is the introduction of innovative techniques in organisations.

Dr. Armando Ferro works as professor at the Faculty of Engineering in Bilbao, UPV/EHU, and he is PI of the NQaS research group. He received his Electrical Engineering degree in 1986 and his PhD in Information Technologies in 2002, both of them from the University of the Basque Country. He counts with 20 years of experience in ICT and security fields; where and he has co-authored more than 30 papers. He is founder of the security-related company Nextel.

Mr. Jose Oscar Fajardo will lead the research concerning the use of IMS for orchestrating emergency communications over heterogeneous radio access technologies (TETRA, LTE). He works as research fellow in the Department of Communications Engineering of the UPV/EHU since 2003, when he received his MSc in Telecommunications Engineering. Since then, he has been involved in several national and EU-funded R&D projects in the area of QoE and dynamic service/network management, where he counts with several international publications.

Mr. Mikel Ramos has joined the NQaS research group in the scope of GERYON project, where he will be responsible of technology-specific implementation details regarding TETRA and LTE technologies. He received his MSc in Telecommunications Engineering in 2008 from the University of the Basque Country. Afterwards, he joined PANDA Security where he has been working on the area of systems performance analysis till now.

Ianire Taboada works as assistant lecturer and research fellow in the Communications Engineering Department of the University of the Basque Country, at the Faculty of Engineering in Bilbao. She received her MSc degree in Telecommunications Engineering in 2008 and she is now Ph.D. candidate. Her research interests include PQoS/QoE/QoS assesment in converged networks as well as multicriteria optimization and applied mathematics for tasks and packet scheduling.

University of Plymouth

The University of Plymouth is the largest university in the southwest of England with over 30,000 students and almost 3,000 staff. The University contributions are led by staff within the Centre for Security, Communications and Network Research (CSCAN) (http://www.cscan.org), based within the School of Computing and Mathematics. The School has expertise in most of the relevant technical areas of the project. In particular, it has strong expertise in multimedia communications and network/system security and a long track record of R&D work in key areas of ICT.

In the project, University of Plymouth will lead Task 3.6, Task 5.4, Task 5.5 and WP7 on Dissemination, Standardization and Exploitation. University of Plymouth will also contribute to WP2, WP6 and other tasks related to security, media transmission and signalling.

Short profile of the staff members

Dr Lingfen Sun holds a PhD in Computing and Communications, MSc in Communications and Electronics Systems and BEng in Telecommunications. She is an Associate Professor (Reader) in Multimedia Communications and Networks at Plymouth University. She has been involved in EU COST Action IC1003 QUALINET, FP7 ADAMANTIUM, FP6 BIOPATTERN and led an industry funded project on multimedia quality over 3G networks. She has published over 60 papers in international journals and conferences since 2000. She is the Chair of QoE Interest Group of IEEE MMTC, 2010-2012. Her main research interests include VoIP, IPTV, QoS/QoE assessment, control and management.

Dr Nathan Clarke is an Associate Professor in Information Security and Digital Forensics at Plymouth University. His interests include user identity, mobility and intrusion detection; having published 75 papers in international journals and conferences. He has also authored the books "Transparent User Authentication (Springer) and Digital Forensics: A Pocket Guide (IT Governance). He is a chartered engineer, a fellow of the BCS, a senior member of the IEEE and a UK representative in the IFIP working groups relating to the Human Aspects of Information Security & Assurance (co-vice chair and co-proposer).

Prof. Steven Furnell is the head of the Centre for Security, Communications & Network Research (CSCAN) at Plymouth University, and an Adjunct Professor with Edith Cowan University in Western Australia. His interests include security management and culture, computer crime, user authentication, and security usability. He is the author of over 220 papers in refereed international journals and conference proceedings, as well as books including Cybercrime: Vandalizing the Information Society (2001) and Computer Insecurity: Risking the System (2005).

Dr Is-Haka Mkwawa holds a PhD in Computing from the University of Bradford. He is currently working as a research fellow within EU FP7 GERYON project at the Plymouth University. He has also been working in various capacities on EU FP6 and FP7 projects (e.g. ADAMANTIUM, VITAL and NoE Euro FGi) since 2002 with the Plymouth University, the University of Bradford and the University College Dublin. He is the author of several refereed publications on parallel computing and communication, VoIP quality adaptations, Mobility management in mobile and wireless networks, performance analysis and evaluation of computer networks.

Dr Fudong Li is a Research Fellow for GERYON project within CSCAN at the Plymouth University, where he previously completed a BSc(Hons.) degree in Computer System and Networks, an MRes degree on the subject of Network Systems Engineering and a PhD degree in Behaviour profiling for mobile devices. His research interests are behaviour profiling, user authentication and intrusion detection techniques for mobile devices, and network security for 3G, LTE and IMS domains.

Dr Emmanuel Jammeh holds a PhD in Electronics Systems Engineering and a Beng (1st Class Hons.) in Electronics Systems Engineering (Telecommunications) from the University of Essex. He works as a Research Fellow for GERYON project within CSCAN at the Plymouth University where he had previously been involved in EU FP7 ADAMANTIUM project. His main research interests include networked multimedia services, IPTV, networked multimedia QoS/QoE assessment, control and management.

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