



EUROPEAN COMMISSION  
Information Society and Media Directorate-  
General  
Components and Systems  
ICT for Transport



## 5<sup>TH</sup> PSAP EXPERT GROUP MEETING

**Subject: Candidate transmission technologies (*Point 5.2 of the Agenda*)**

Dear Sir,

As a promoter of one of the candidate technologies for the transmission of the eCall Minimum Set of Data which passed successfully the first performance tests of the independent test laboratory, we would like to invite you to present your technology at the next meeting of the PSAPs expert group. This meeting will take place in Brussels on 9<sup>th</sup> October 2008.

Please note that we have also invited the chair of the 3GPP SA4 to present the selection procedure and the test results in this meeting.

Besides the analysis of the technical performance of the candidate technologies, it is important that the eCall stakeholders get information on the potential implementation of the candidate technologies.

Therefore, we would appreciate if you could explain in the meeting what would be the impact that your technology would have for both the PSAPs and automobile side, in terms of equipment/software, how the equipment is integrated with PSAP systems and in the in-vehicle devices, and what would be your licence policy towards the PSAPs and the automobile manufacturers.

In particular, you should provide a detailed and precise answer to the following questions:

### *Questions:*

- (1) What is the projected cost of implementing your technological solution for the transmission of the eCall MSD to the PSAP? (i.e., equipment needed –HW, SW, maintenance approach, etc.)

Airbiquity's in-band modem solution can be implemented on different platforms giving the PSAPs the maximum flexibility of integrating the eCall service so that it aligns with their architecture. These implementations can range from utilising a simple analogue line to a Digital E1 or a Voice over IP (VoIP) connection. The benefit of this flexibility is to accommodate the different implementations of 112 across Europe. If requested by a PSAP or a Member State Airbiquity can support the PSAP with a complete solution.

Airbiquity also offers a software solution which enables the PSAPs to utilize already existing infrastructure. The software can be easily integrated into existing PBX (Private Branch Exchange) or CTI (Computer Telephony Interface) servers.

Airbiquity has already been working with several Member States for evaluating the PSAP impact of the eCall service and more specifically the architectural effort to implement the Airbiquity's in-band modem.

Airbiquity's license fee on IPR related to eCall in-band modem is outlined in answer to Question 6 below.

There is no maintenance costs associated with the usage of the open standard for eCall.

- (2) What would be the time-frame when your technology would be ready to be tested and deployed for the PSAPs, if selected?

Airbiquity's in-band modem solution for eCall is ready for deployment TODAY. It has been commercially deployed in both CDMA and GSM networks over the past five years and proven to work reliably and seamlessly in commercial live GSM networks over AMR, EFR, FR, and HR codecs.

Airbiquity also has a standard set of software and hardware packages today, including detailed software specification, API, sample applications, implementation guidelines, and test procedures that will assist PSAP and Automobile OEM in quick prototyping and testing of eCall functionalities and fulfil EU's targeted deployment date in 2010. Airbiquity is currently supporting eCall trails/demos with OEMs and TSPs across Europe including under roaming conditions.

An example of the readiness and resilience of Airbiquity's technology was demonstrated during recent North American weather events where the Airbiquity in-band modem was used for crisis assistance. In September 2008 Hurricane Gustav came ashore in the gulf coast, prompting a wide-spread evacuation of nearly two million people. OnStar, powered by Airbiquity's in-band software modem, played a big role in the providing evacuation assistance in the form of route planning, hotel reservations, locating Red Cross Shelters and even contacting other evacuees on the congested roadways. Handling calls from three call centres, OnStar's specially trained advisors efficiently managed a call volume that topped 3,000 calls per hour with a record total of 75,000 calls received in a single day. Callers' locations were immediately transmitted to the OnStar advisors by way of the aqLink in-band modem; by the time the callers were speaking with operators, the call centre already had a location fix and were able to offer relevant emergency guidance immediately. Based on the increase in emergency calls during Hurricane Gustav, OnStar offered complimentary "Crisis Assist" emergency services to evacuees of Hurricane Ike and Tropical Storm Fay, regardless of subscription plan.

- (3) What would happen to those PSAPs not upgraded in case they will receive an eCall with the MSD being sent with your technology (i.e., risk of blocking the call, incompatibility, PSAP operator listening a beep during X seconds.)

When an eCall is received by the PSAP the MSD will be pushed from the IVS to the PSAP which is enabled to receive the MSD. In the event that the PSAP is not enabled to receive the MSD the IVS will switch from trying to push the MSD to voice after a pre-defined timeout as stipulated by the high level requirements in CEN TS278 WG15. The PSAP operator in this case will not hear a 'beep', but will be in direct voice contact.

- (4) What would be the cost of implementing your technological solution for the transmission of the eCall MSD to the in-vehicle system (IVS)? (i.e., equipment needed –HW, SW, maintenance approach, etc.) Will be there any particular constraint regarding HW?

Airbiquity is a software communication company and as such, we have equipment vendor partners or can work with your selected vendors to provide hardware for the IVS.

Airbiquity's in-band modem solution is already proven to work in various cost effective commercial platforms, whether embedded or utilising Bluetooth without requiring costly processor, memory, or hardware upgrades.

Our design consideration for targeting low cost and low memory utilizations enables our solution to be implemented across a wide spectrum of commercially available general purpose processors, such as ARM7, ARM9, PowerPC, and Renesas processors. The modem is also fully integrated into various commercial real-time operating systems such as QNX, Embedded Linux, VxWorks, WinCE, MicroC, etc.

Airbiquity's in-band modem therefore can be implemented on general purpose processors, DSPs or within GSM communication modules/chipsets leading to cost optimised solution for the IVS.

Our modem software already is commercially available with Siemens/Cinterion Wireless Modules, Wavecom, Continental, Denso, LGe, Motorola and Delphi.

If selected, Airbiquity will immediately provide a reference design software document detailing implementation, protocol, and call flows for the eCall service.

Airbiquity's license fee on IPR related to eCall in-band modem is outlined in answer to Question 6 below.

There is no maintenance costs associated with the usage of the open standard for eCall.

- (5) What would be the time-frame when your technology would be ready to be tested and deployed within the vehicles if selected?

As previously mentioned, Airbiquity's in-band modem software solution is available TODAY for testing by vehicle manufactures. The vehicle manufactures have several different options for doing so as they can approach any of the Airbiquity's in-band modem enabled suppliers, such as Continental, Wavecom and Siemens/Cinterion Wireless Modules in Europe. In addition Airbiquity is working with several other suppliers including chipset manufacturers who will be enabled with Airbiquity's in-band modem by end of 2008.

To support this testing vehicle manufactures can utilise the different servers installed across Europe. Servers are operational today in Germany and Belgium, with an additional installation planned for end of October 2008 in Italy.

One important fact is that the implementation and testing has been done without any changes to the existing cellular networks across Europe.

- (6) Please describe your licensing policy (IVS and PSAPs)

The licensing fee for the use of Airbiquity's in-band modem IPR for equipment installed within PSAPs or service providers operating under the control of the public authorities for eCall in Europe, enabling Pan European Public eCall using the emergency call number 112 is free of charge.

The licensing fee for use of Airbiquity's in-band modem IPR for equipment installed within the vehicle to enable Pan European Public eCall using the emergency call number 112 will be a onetime nominal payment per installed equipment (IVS).

You may use PowerPoint presentations to present your technology.

For any questions concerning this discussion point, please contact Mr. Emilio Davila (Tel.: (32-2) 2962188, e-mail: Emilio.Davila-Gonzalez@ec.europa.eu)

Thank you in advance for your kind contribution to this meeting.

Looking forward to meeting you in Brussels,

Andre Vits  
Head of Unit