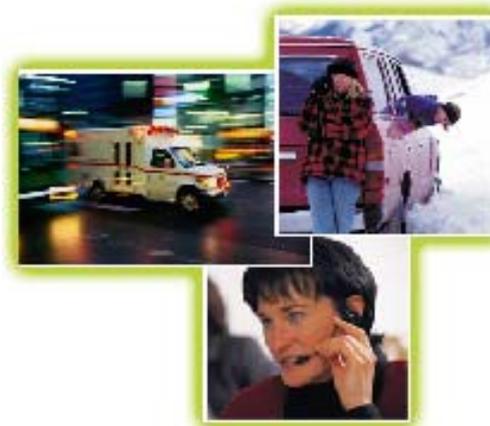




In-Band Modem Data Transfer for eCall

January 23rd, 2006

www.airbiquity.com

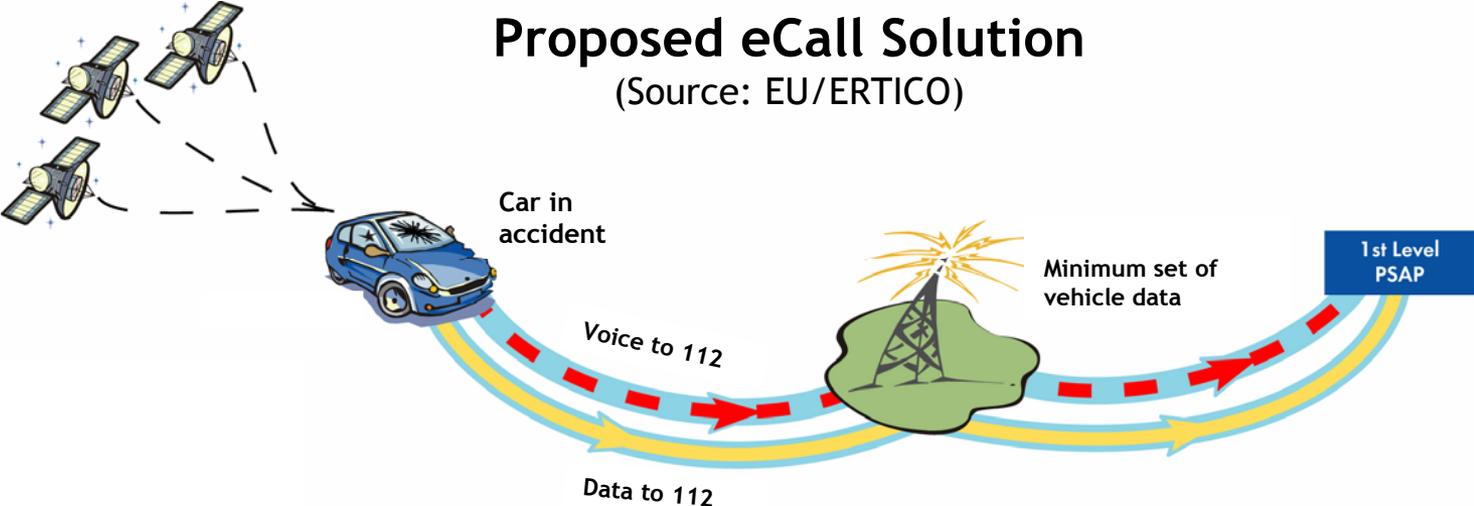


In-Band Modem: Solution for eCall



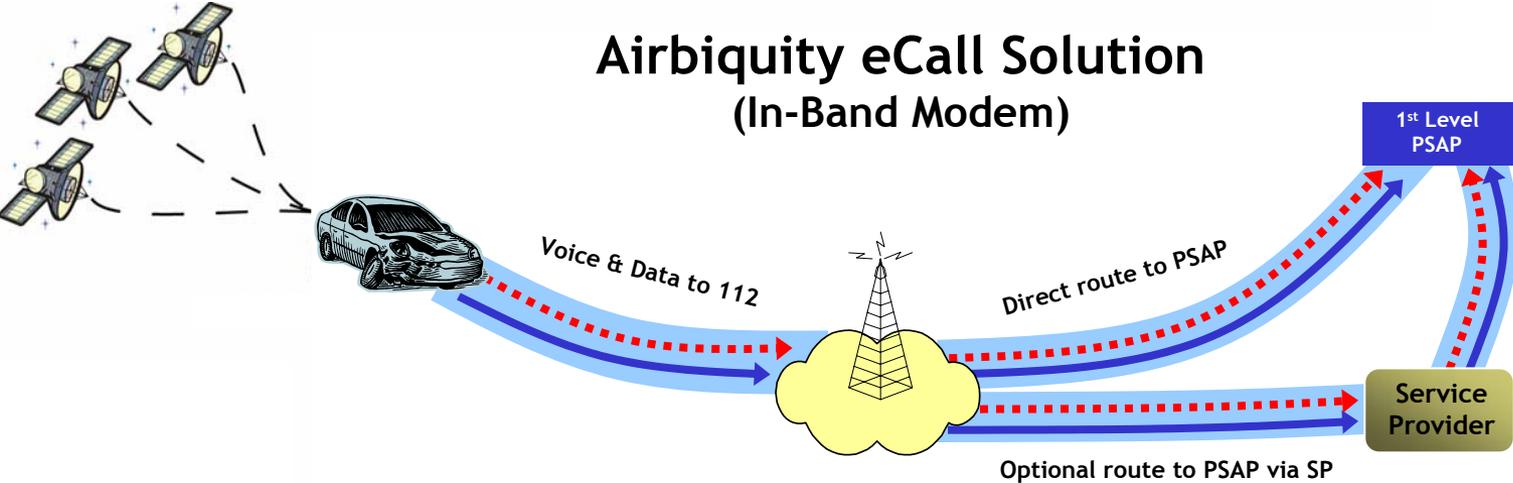
Proposed eCall Solution

(Source: EU/ERTICO)

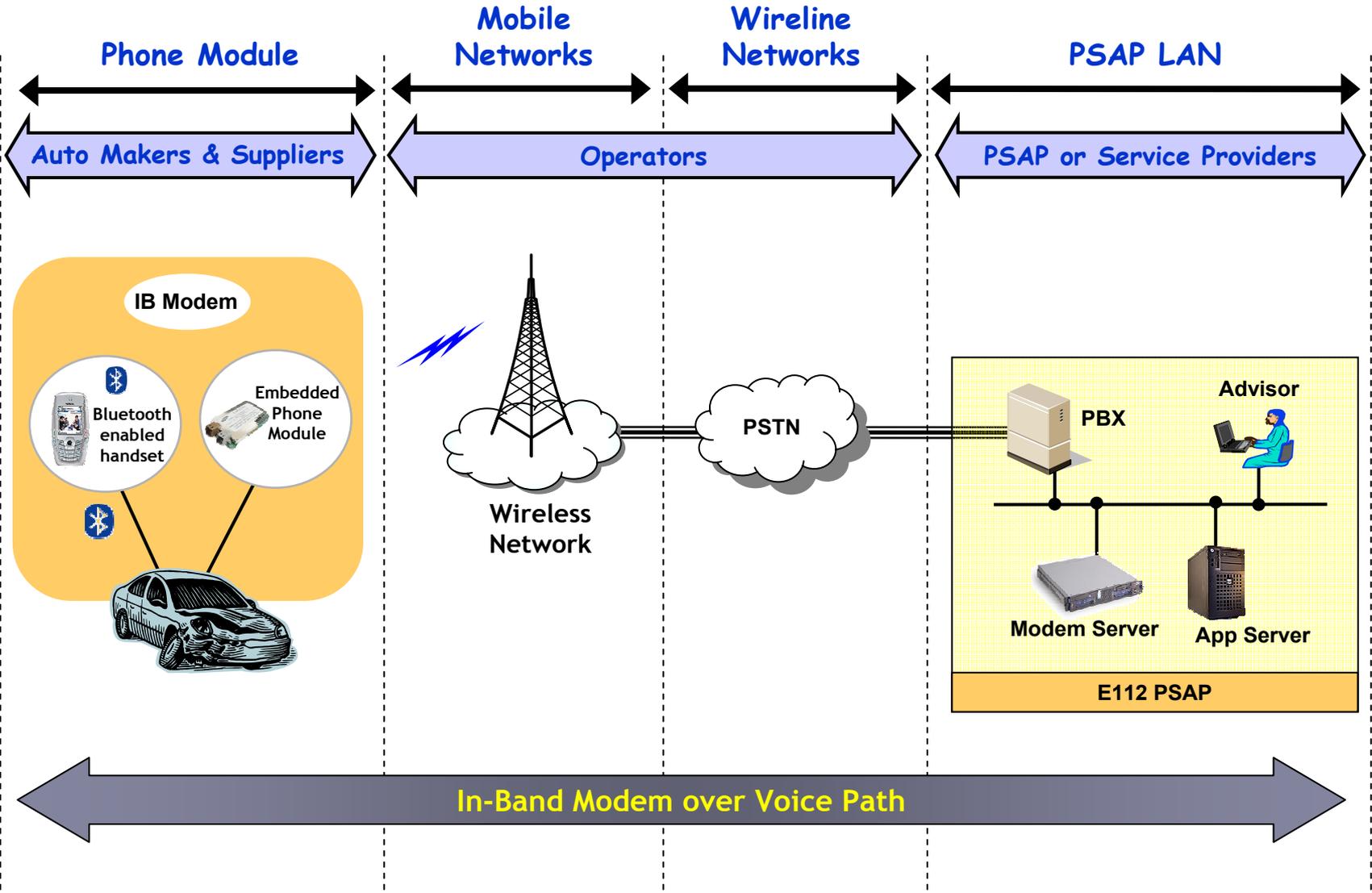


Airbiquity eCall Solution

(In-Band Modem)



In-Band Modem eCall Solution



- **Works seamlessly across multiple carriers with no impact to roaming agreements – No interoperability issues**
- **Instantaneous transmission of MSD using established voice channel**
- **Full-Duplex & acknowledged delivery of MSD to PSAP**
- **Fast and Reliable transmission of MSD**
- **Supports switching between voice and data modes**
- **Leverages existing carrier infrastructure without upgrades or re-provisioning**
- **Flexible and scalable server architecture supporting centralized and distributed network implementations**

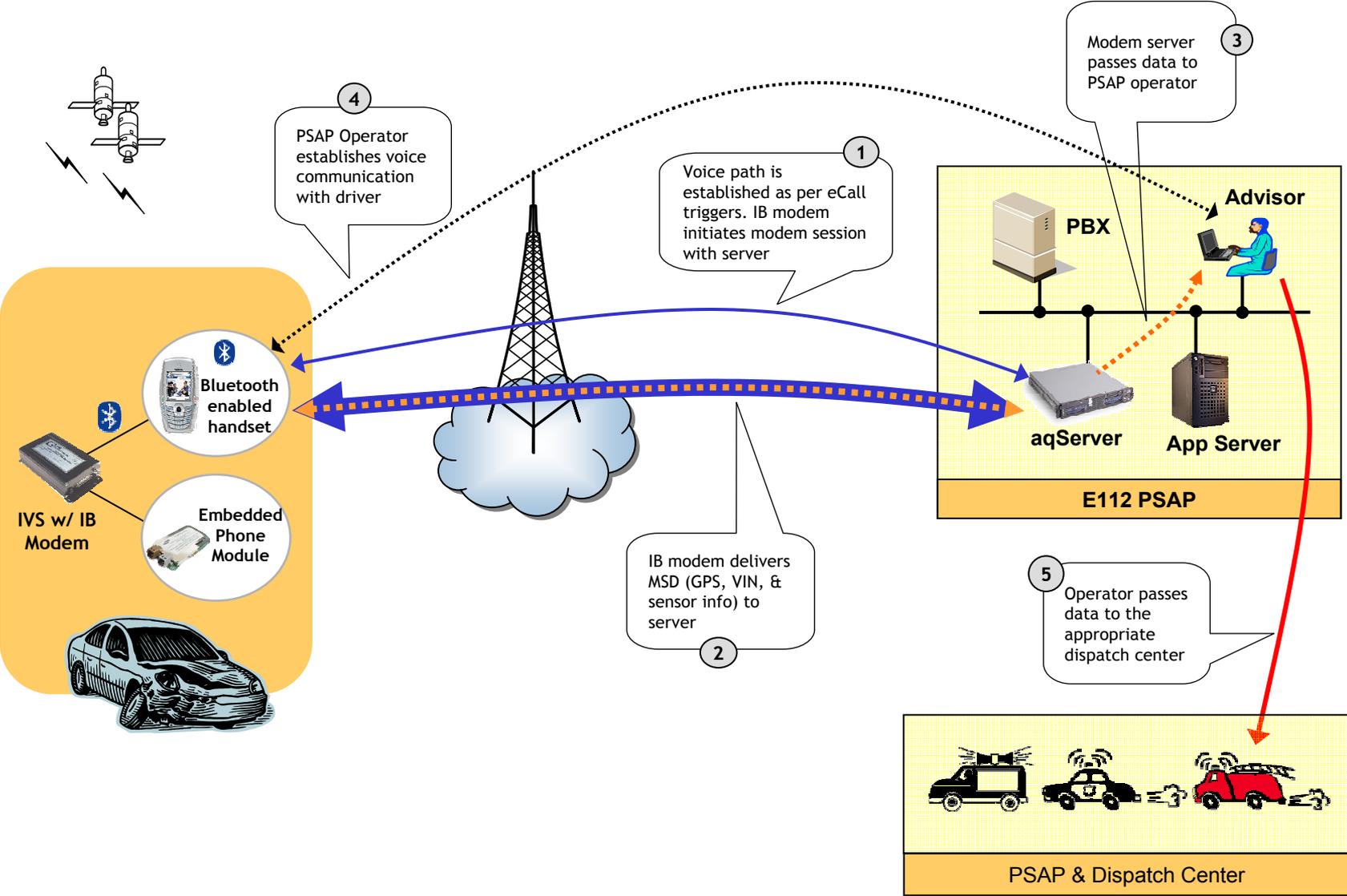
- **No impact to existing mobile handsets or mobile networks:**
 - Reliable as GSM itself and proven in over 3 million vehicles
 - Widest coverage – ubiquitous roaming for voice networks
 - Agnostic of underlying radio technologies – GSM, UMTS, CDMA, iDEN
 - No packet data subscription required
- **Voice and data in one phone call session – eliminating cumbersome & unreliable phone call & out-of-band data correlation**
- **Compelling cost model:**
 - Low cost of entry – leveraging existing voice infrastructure
- **Platform independent – supporting IVS with embedded phone module and external mobile phone via Bluetooth**

- **Users**
 - Reliability and ubiquity
 - No impact to existing or future handsets

- **Network Operators**
 - No impact to existing infrastructure and networks
 - Low cost of service deployment and operation
 - Ready to deploy TODAY
 - No risk solution

- **OEM (Automakers) & Telematics Service Providers**
 - Ease of implementation – software only solution
 - Field proven technology with millions units already deployed
 - Supports both embedded phone module and Bluetooth enabled handset
 - Enables value added services

In-Band Modem Call Flow Example



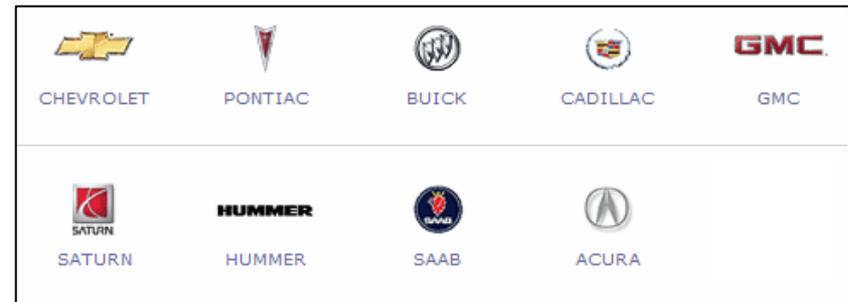
Cost Effective Data Transfer Solutions for Mission-Critical Communications



- **In-band modem enables reliable delivery of mission critical data over wireless networks**
- **The solution can be rapidly deployed with no impact to existing wireless infrastructure**
- **The solution is deployed by the world's largest TSP (OnStar by General Motors) in US's largest mobile network (Verizon)**
- **Extensively tested in North America CDMA, GSM/EDGE, and iDEN networks**
- **Successfully won service contracts against other competing technologies – SMS, DTMF, Control Channel Data, and Satellite.**
- **Over 3 million units in service today**
- **Our data servers in call centers handles thousands of safety and security calls per day**

Monthly average of OnStar responses for Nov 2005 includes:

350	stolen vehicle locations
800	Air bag notifications
4,500	Good Samaritan calls
14,000	emergency calls
24,000	remote vehicle diagnostics
19,000	roadside assistance calls
40,000	remote door unlocks
344,000	routing calls



- **In-band modem satisfies eCall requirements & goals**
- **Plan for in-band modem standardization and IPR declarations in ETSI/3GPP is in progress**
- **Ready for Deployment TODAY**
 - Field proven technology playing a role in saving lives everyday