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## Comsys' hosting platform enhanced by Prosody X with SS7

Comsys is a privately held company based in The Netherlands with a focus on the integration of voice, web and mobile value added services and solutions. It operates in this new cross media landscape, providing IN, 3G, IMS, SIP and VoIP solutions for fixed line operators, mobile operators and MVNOs.



Comsys' global presence comprises an installed base of thousands of ports across the world. Comsys is also a leading pan-European service provider and operates a number of multimedia service hosting platforms throughout the continent. The company maintains its role as a key supplier in this industry by investing substantially in new technology.

When Comsys' Multi Media Solutions division wanted to put into place a fundamental expansion of Comsys' European hosting platforms, it turned Aculab for vital enabling technology.

### **Success brings new requirements**

Technology is constantly evolving, making the marketplace more competitive, which means companies must accomplish more and more with the resources they have available. Using hosted business communication solutions frees up valuable resources, delivers results and reduces costs.

Success breeds success and in order to meet demand, Comsys' hosting platforms in The Netherlands, United Kingdom, Germany, Switzerland, Austria and Poland needed to be expanded. This was not simply in terms of capacity, but also for new functionality.

A substantial driver for change was also the desire to be able to rapidly deploy new and innovative applications. Through a more efficient delivery system, Comsys was seeking to ensure a short time to market and lower costs for it and its growing customer base. Hence the decision was taken to integrate new platform architecture, rather than bolt on an extension to the existing model.

Importantly, the hosted delivery platform needed to offer a wide range of applications and services in diverse categories such as self service, finance, entertainment, human resources, enterprise and telecommunications. Examples of applications and services include: directory service; information and reservations; stock/money transactions; televoting (mass calling); voicemail; sales force automation; IVR; ring back tones; fixed line SMS; unified messaging; and premium rate services.

In addition, conventional TDM (ISDN PRI) connectivity needed to be ramped up and in the UK, coincident with this expansion, there was a need to change from ISDN to a more economical SS7 interconnect. Furthermore, SIP needed to be available as a result of growing customer demand for VoIP services.

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### **The Comsys solution – Prosody X with SS7**

Comsys developed their T-Series SpeechFrame distributed multimedia facility platform to support IVR, fax, email, SMS, ASR, TTS and web integration. The platform runs on the SPARC Solaris 10 operating system and can be used by fixed and mobile telcos and service providers as an IVR, service node (SN), carrier grade switch (SSP) or protocol converter.

The T-Series SpeechFrame consists of a programmable, carrier grade switch that, thanks to Aculab's large portfolio of protocols, supports almost any digital network access protocol. It also comprises multiple application servers, with both the switch and the attendant servers guaranteeing a high level of availability. The chosen application servers are SUN platforms and the switch is a CompactPCI solution using high density Prosody X cPCI cards from Aculab.

All hosting platforms are equipped with an initial capacity of 16 Prosody X cPCI cards, offering both SIP (via dual Gbit Ethernet) and E1 interfaces with a combination of protocols. The platforms are expected to be able to grow to in excess of 1400 channels – 48 E1s. With CompactPCI, this high density can easily be achieved.

Aculab's support for SPARC Solaris was essential as was the high density of trunk interfaces and media resources available with the Prosody X cards. The ability to install cards for expansion needs without service interruption in a high availability system was also a critical factor in the choice of technology. Each Prosody X cPCI card is controlled remotely over Ethernet from the Solaris application platforms.

Comsys needed SS7 interconnection for the UK's London installation, and Aculab's dual redundant signalling architecture, with its distributed ISUP call processing capability, was a perfect fit. Implementing an SS7 signalling interface with redundancy at the MTP3 level is essential for any carrier grade switch requiring high availability performance. Aculab's SS7 software provided Comsys with several advantages, including the vital redundancy, excellent scalability and ultimate cost effectiveness desired.

Comsys' distributed design means the separation of application and voice resources, creating a decentralised telephony architecture (see figure 1). In practice, this means multiple VoiceXML/CCXML applications sharing the same localised telephony resources. The applications are deployed to serve each hosting site and can be accessed from any other hosting site in case of congestion on the TDM side. The result is the ability to provide easy distribution of voice dialogues from one single central logic and control site over multiple country locations, reducing telephony transportation costs and minimising the integration with back-end systems.

VoiceXML/CCXML interpreter software in the SpeechFrame IVR servers presents a standards-based interface to the applications, allowing them access to the media processing and signalling functions in the telephony server. The use of VoiceXML/CCXML scripting languages significantly speeds up the application development or service creation process by eliminating the need to develop with native product APIs, providing faster time to market, while reducing the associated costs.

Standard application modules using Prosody X media processing resources such as playback and record, fax, conferencing and echo cancellation were created. Significantly, these modules provide speed and flexibility in the realisation of tailor made applications for customers. The flexible service creation ability is unequalled, because of the use of open software standards like Java, VoiceXML and CCXML, which makes SpeechFrame an attractive proposition.

Comsys' T-Series SpeechFrame offers network and service providers all the desired basic services needed for subscribers and new customers alike. Income generating

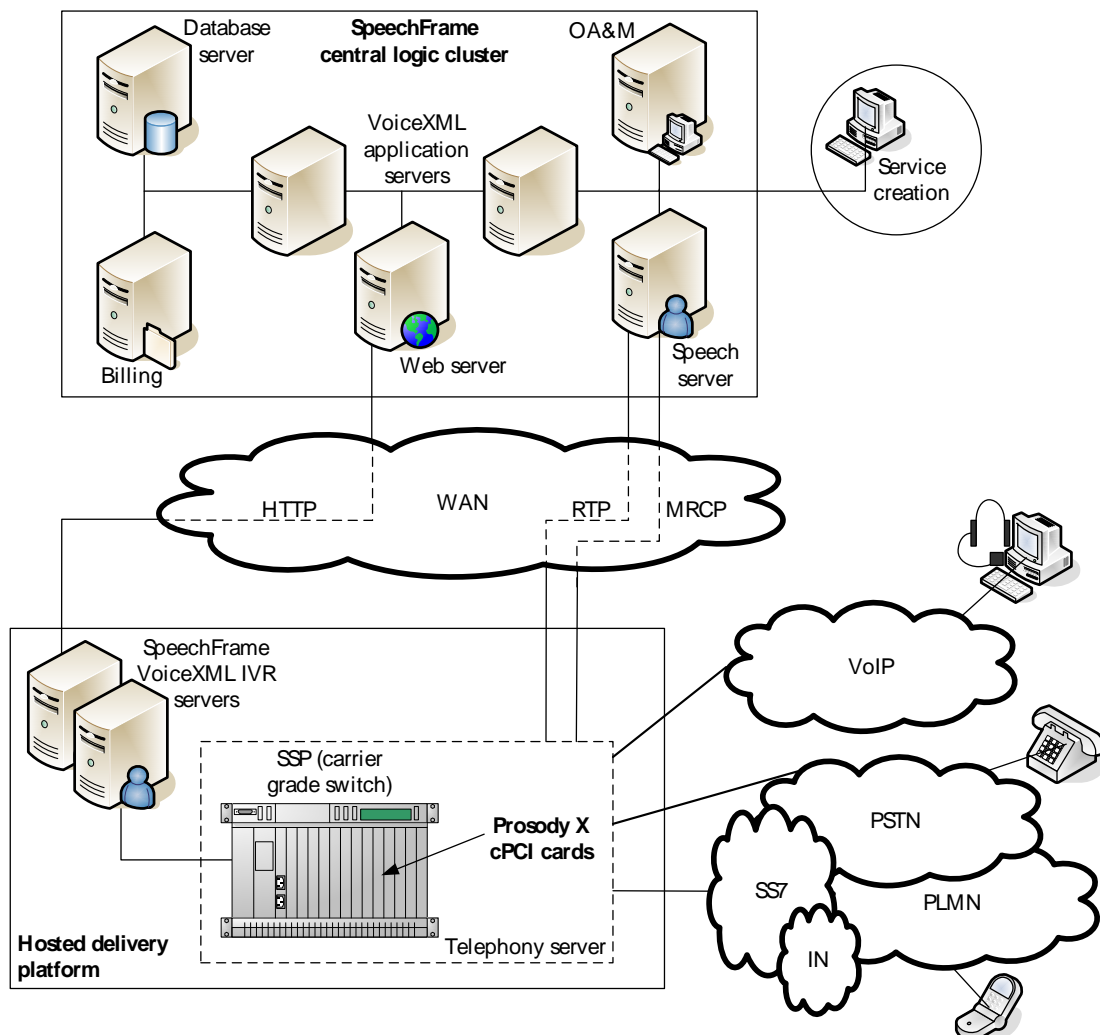
supplementary services can also be easily created, such as premium rate, fraud detection, number identification, SMS messaging and location-based services. Voice response services such as voicemail, voice messaging, text-to-speech and media services are additional options for the T-Series platform, which offers telcos the opportunity to fine-tune their services to the individual customer.

For small, medium or large organisations, for short or long term campaign support, the need to invest large sums of money in telephony equipment, system integration and application development together with the additional personnel needed to cope with additional inbound and outbound calls is no longer necessary. Comsys is able to provide solutions for all possible occasions with a low initial capital outlay, low ongoing cost and rapid return on investment.

Commenting on the contribution of Aculab, Joost van der Stelt, Manager Production and Innovation at Comsys, said, *“Aculab has a great reputation in the market, providing stable, reliable products, advanced features, telecom protocol availability, and excellent support services. We needed such a partner with the right kind of product for our new SpeechFrame platform.”*

Ian Colville, SS7 Product Manager at Aculab, added, *“Comsys’ use of Aculab’s Prosody X and its SS7 capability is a great advertisement and an endorsement of the distributed design, linear scalability and redundancy features of the product. With our redundant and distributable SS7 stack being readily available to Prosody X users under a cost free licence, it delivers tremendous value and performance to Comsys.”*

Figure 1 – Comsys' service hosting architecture using Aculab's Prosody X media processing platform and SS7 software



The diagram above illustrates the configuration installed at the London hosted site and replicated at the other Europe-based locations. VoiceXML/CCXML applications and services are created or edited/adapted to run on servers in the central logic cluster, and the redundant SpeechFrame VoiceXML IVR servers – as Java-built VoiceXML/CCXML interpreters – control the telephony server functionality, including Prosody X media processing resources with SS7 and SIP support.