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NEWSLETTER **SUMMER 2007 EDITION**

EMCC NEWS

Symbian devices built for entertainment

In addition to communication, mobile phones are now built for entertainment. The current generation of smartphones are enriched with a plethora of multimedia capabilities. While early devices offered a simple game of Snake, devices can now play or record music and video, be used to browse the web, take pictures, listen to the radio, watch TV etc. Symbian OS with its multimedia framework provides an excellent platform on which to build an entertainment device.

The recently announced Sony Ericsson W960i, based on Symbian OS™ v9.1 and UIQ 3.0, is part of their Walkman range. Its 8GB of internal memory can store up to 8000 songs and its touch-sensitive screen means that these can easily be navigated with the new Walkman Touch player, which supports album art and easy sorting. Other features which cement its reputation as a music player include the clever TrackID music recognition

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A truly corporate mobile phone

Office-based communications are traditionally routed via a Private Branch eXchange (PBX) which connects the desk handsets to the outside world while providing a wealth of features. A mobile phone can be integrated into the PBX solution, simply by considering it just another off-PBX extension. It can be a target for re-routed calls and can use an externally visible number to get access to voicemail and so on. It's an elegant solution.

A modern PBX is likely to be Internet Protocol (IP) based and is capable of utilising an IP-based interface to the public switched telephone network (PSTN). IP based software telephony clients (softphones) allow a PC connected to the PBX to effectively appear as a fully-functioned extension with all the features that the PBX makes available. This scales to include remote workers using a virtual private network (VPN) on an external PC. However, the requirement for connectivity makes it awkward to use softphones on the road; in this case a smartphone which can provide many of the same functions is invaluable.

EMCC has provided solutions based on softphones and integration of mobile into IP PBX systems for several manufacturers and mobile operators and has had extensive experience of the detailed issues involved.

The first step of mobile integration is to develop an application that wraps all of the access and call menu navigation into a simple UI. In many cases, this first level of integration along with features such as simultaneous ringing is all that is required. However, users may start to use their mobile rather than their free extension-to-extension calling which could potentially cost not one, but two mobile phone calls; one to the PBX and one coming from the PBX to the target mobile! Also, the incoming call capacity at the PBX – bandwidth that has to be paid for – is being used for extension-to-extension calling.

Fortunately, technology once again provides the answer. Wi-Fi networks and dual mode (Wi-Fi enabled) devices are becoming increasingly common in the corporate environment.

There are two main ways of using Wi-Fi to improve mobile integration. Firstly, assuming that the IP network supports Wi-Fi, a mobile phone client can simply connect to the PBX over Wi-Fi and enjoy free feature access and calling. A second solution is to provide an independent Wi-Fi network purely for accessing the PBX which requires more planning but removes issues of sharing the network with other bandwidth hungry applications.

There are known problems associated with VoIP. Quality of Service (QoS) issues are still a problem although they can be reduced by using an isolated Wi-Fi telephony network. Call handover is the biggest problem for VoIP enabled PBX solutions. Determining when handover should occur is the first issue; the second being the method used to actually perform the handover. An assisted handover is the most common solution, with the PBX generating a call over GSM to the mobile phone, which then drops the Wi-Fi leg (or vice versa). This doesn't however give a seamless experience as the calls are generally placed on hold whilst the handover takes place. Equally, problems of sudden drops in signal quality cannot easily be handled.

Whichever Wi-Fi solution is selected, it opens the door to significant cost savings. Extension-to-extension calling is once again free and external calls from a mobile extension can be routed at preferential landline rates. Enabling mobile integration into IP PBX solutions has other immediate benefits in terms of accessibility of remote personnel which leads on to improved quality of services for sales and customer care.

For more information on any of the issues raised in this article please contact us at enterprise@emccsoft.com or visit our website www.emccsoft.com

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software - which supports recording of a song clip and subsequent instant discovery of artist name, track and album, the FM radio, and the inclusion of a Stereo Bluetooth headset for music streaming allowing wireless enjoyment of your music.

While it is the 'Walkman' features that distinguish the W960, it is also a very capable video player offering TV quality on its 240x320 pixel display.

The Nokia N95 (Symbian OS v9.2 and S60 3rd Edition FP1) was released in March 2007 and has won the 2007 TIPA Award for Best Imaging Device in Europe. Immediately impressive is its built-in 5 MP camera with Carl Zeiss Optics. On the side of the device there are several buttons dedicated to camera usage allowing the device to be held in a similar way to a traditional camera. Video capture is also available with near DVD quality supported.

Audio support on the N95 is also excellent. A wide range of formats are supported and activating the sliding mechanism on the device reveals a set of dedicated media hardware keys to facilitate control of audio and video media. Support for gaming on the N95 is also very good offering an experience closer to a dedicated console system than can usually be found on smartphones.

The MOTORIZR Z8, built on UIQ 3.1 (Symbian OS 9.2), has a striking design with a 'kick-slider' mechanism that allows the phone to angle around the users face. The Z8's commitment to multimedia is demonstrated through the inclusion of a 512Mb SD card pre-loaded with a full-length feature film ("The Bourne Identity") and a Motorola S9 Bluetooth stereo-headset.

The device comes preinstalled with the Sky Anytime mobile application - an interactive mobile TV application that extends Sky's digital TV experience to the mobile platform with access to an on-demand library of updating news as well as an access point to Sky's range of live mobile TV services.

The popularity of video and photo sharing has been recognised with the inclusion of the ShoZu application which provides integrated options to upload files to Flickr, YouTube and Myspace.

EMCC has extensive multimedia experience on the Symbian Platform. For further information technology@emccsoft.com

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Exciting opportunities offered by the Windows Mobile 6 platform

Windows Mobile 6 (WM6) is the latest platform for Windows Mobile powered devices. It's fair to say the WM6 is an evolution rather than a revolution in the Windows Mobile line of platforms, building and improving on Windows Mobile 5 (WM5), without alienating this existing user base. WM6 is based on the same underlying operating system as WM5, namely Windows CE 5.0. This provides very strong compatibility between the two platforms.

With in-depth expertise across all versions of Windows' device platforms, EMCC has development experience in Line of Business applications and mobile technologies such as Voice over IP (VoIP), Push Email and WiFi. This has allowed EMCC to take advantage of new opportunities the Windows Mobile 6 platform has to offer.

Email is much improved on the new platform. This includes the ability to search emails, full HTTP email support, and a number of UI improvements. The calendar application has also been given a makeover for WM6. The user interface is significantly better, giving the user more immediate and useful information about their schedule.

There are a number of additional features available to Exchange Server 2007 users, including support for email flags, Out-of-Office messages, and additional scheduling support.

Other improvements to the platform include greater overall platform stability, Windows Live integration, and a nice feature allowing a user to easily set up their Windows Mobile 6 device as a wireless modem for their PC, using a USB or Bluetooth connection. Additionally, the platform UI had been updated, giving it a look and feel similar to Vista.

For developers, the .NET Compact Framework 2.0 is now preinstalled in ROM, allowing for faster and easier Line of Business application deployment.

There are also significant improvements to the device emulator, including a new Cellular Emulator and power simulation tools among others. Because of the strong compatibility with WM5, developers are able to quickly start developing WM6 applications.

One notable improvement is the support for VoIP. This is aimed at OEMs wanting to make use of this technology, and may not be available on certain devices at their discretion. Its inclusion is significant as it will make VoIP enabled devices much easier to build, and may lead to a greater number of VoIP service providers partnering with Microsoft to build fully functional IP phones.

In terms of devices, the first WM6 device to be released was the Orange SPV E650, which is a rebranded HTC S710.

Other existing or confirmed devices include the Motorola Q9 and the HP iPAQ 514 Voice Messenger.

It is also possible for users to upgrade their Windows Mobile 5 based devices to the new platform, although full support for this is operator/OEM specific.

Windows Mobile 6 is a new but familiar platform for user and developers alike. With increasing numbers of new devices and upgrades available, it is a significant platform in the smartphone devices ecosystem.

For further information on our Windows Mobile capability please contact windowsmobile@emccsoft.com or visit our website www.emccsoft.com