



CELLPHONE RADIOS

Cellphones are everywhere and owned by nearly everyone. More and more, cellphones are being used not just as telephones, but to connect laptops to computers, function as MP3 players and, as was seen at this year's NAB show, they are starting to be used as mobile video devices.

Many in the broadcasting industry believe that an important way for radio broadcasters to compete in this digital, all-in-one-cellphone-device age is to have radios in cellphones, too. One of the world's largest manufacturers of cellphones, Nokia, is including analog FM radios in many of their cellphone products including the Nokia 5700 (\$420) and Nokia 2760 (\$120) shown in the photo at right. These two models are shown here to illustrate Nokia's decision to include FM radios across their entire range of products, from the "entry level" 2760 to the "high end" 5700.



So far, no cellphone manufacturer has yet offered an HD Radio™ option. Samsung Electro Mechanics, a semiconductor, telecommunication, digital media and digital convergence technology company (Suwon City, Korea, www.sem.samsung.com), announced earlier this month that it plans to introduce a new chipset for use in portable and home HD Radio receivers. Samsung intends to use "cutting-edge" 90nm CMOS processing to produce a system-in-package (SiP) device that measures 25mm by 25mm by 2mm, which according to Samsung is one-twentieth the size of competing modules. This module will operate on 150mW which represents a ten-to one reduction in power compared to other, existing HD radio modules. Target HD Radio applications include cellphones, portable media players, portable navigation devices, table radios and home audio-video components, however, further reductions in power consumption may be necessary before this module can be used in cellphone applications (it was suggested at a recent NRSC meeting that a cellphone-capable HD Radio IC would need to consume only 40 mW). Samsung anticipates that samples of the HD Radio chipset will be available before the end of the 2007 with production anticipated for the first quarter of 2008.

Satellite radio subscribers in the U.S. have a cellphone option which makes use of the Internet called "SelectRadio." This software-based solution runs on Windows Mobile wireless handheld phones and PDAs. Listeners obtain this software from SelectRadio (www.selectradio.com) for a one-time fee of \$25, and once loaded into their cellphone (or PDA) they will have access to Sirius and XM online channels (requiring a

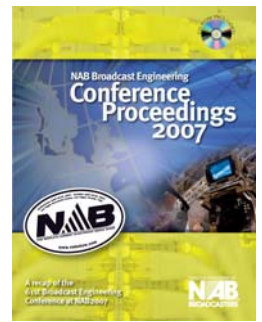
subscription) as well as thousands of "Internet radio" channels (which do not require a subscription). The photo at left shows SelectRadio running on a Palm "Treo" and displaying a list of XM radio channels available.

SelectRadio software users can also see "what's playing" on any of the available satellite radio channels and set up the patent-pending HyperScan™ feature to automatically seek or skip artists to match their personal tastes. Users can access content via dedicated touchscreens of presets for AccuRadio, BBC, radioio, Shoutcast, Sirius, StreetIQ.com and XM Radio, or create personalized groups of channels and podcasts from any of the many music, news, sports, and talk content choices displayed in the local directory. Users also can enter or import a list of favorite podcasts (from programs such as iTunes, Juice/iPodder or sites such as Digg.com). For live listening, SelectRadio requires a network connection via GPRS/EDGE, EVDO, WiFi or ActiveSync USB desktop passthrough mode.

The SelectRadio software is compatible with Microsoft Windows Mobile 5.0 PPC and 2003SE PPC (X Scale 27x processors only), and a wide variety of handheld phone models and PDAs such as the Treo 700 series, the UTStarcom 6700, HP hw65/69xx, HTC Universal, Hermes and others. Also under development is "SelectRadio Pro" which will have a time shift capability. A free 10-day fully functional trial version is available for download directly to compatible mobile devices prior to purchase at the SelectRadio Web site.

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