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## XM SATELLITE RADIO UNVEILS ITS ADVANCED SOUND QUALITY TECHNOLOGY

*XM's Customized CT-aacPlus Delivers Sound Remarkably Close to Compact Disc*

*New York, NY, April 18, 2002* – XM Satellite Radio today unveiled its state-of-the-art digital sound technology, featuring customized CT-aacPlus audio encoding with Neural Audio optimization, which provides superior sound quality remarkably close to Compact Disc.

“XM Satellite Radio, *Fortune Magazine*’s 2001 ‘Product of the Year,’ succeeds because of its superior digital sound technology, unparalleled signal coverage, proven chipset technology and outstanding programming,” said XM Executive Vice President Steve Gavenas at a news briefing today in New York. “The technologies that define XM Satellite Radio sound quality have been auditioned and endorsed by leading audio experts from around the world.”

### CT-aacPlus Audio Compression

The superior XM sound quality experience in the car and home begins in XM’s Digital Broadcast Center, where it creates and integrates its 100 state-of-the-art audio channels. The key to XM’s outstanding sound quality is CT-aacPlus, a third-generation audio encoding technology. CT-aacPlus is the combination of Advanced Audio Coding (AAC), a highly efficient global standard combining the work of the world’s foremost experts on perceptual audio encoding -- AT&T, Dolby, Fraunhofer, and Sony – with Coding Technologies’ revolutionary Spectral Band Replication (SBR<sup>TM</sup>) technology.

Coding Technologies, a technology leader in perceptual audio compression and inventor of SBR (Spectral Band Replication), which creates additional bitrate efficiency, was formed through a merger between a Swedish group of world-class researchers and experts from the renowned German Fraunhofer Institute, the inventor of MP3.

This combination of AAC and SBR, CT-aacPlus, has been tested by high-profile audio experts from around the world. In a double-blind listening test, AAC alone has historically proven 33% more efficient compared to previous generations of competing algorithms. Double-blind listening tests conducted by the BBC, Deutsche Telekom and Robert Bosch GmbH have established that the CT-aacPlus combination is over 30% more efficient than AAC, thereby providing superior sound quality at satellite radio bit rates compared to any other audio coding technology. Based on superior test results, CT-aacPlus has been adopted by International Digital Radio Mondiale consortium and accepted by MPEG as the “reference model” for the upcoming version of MPEG-4.

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### **The Neural Audio Edge**

The XM sound is further optimized with Neural Audio. Neural Audio, a Seattle-based research lab, pioneered future generation audio by merging neural networks with the physics of sound. Neural Audio's proprietary pre-processing software uses advanced neural network computing techniques to implement algorithms that are based on models of the brain's perception of sound.

Neural Audio created a customized version of their process, designed to enhance CT-aacPlus results by optimizing temporal and spectral elements prior to encoding, improving soundstage clarity, and increasing intelligibility. The unique combination of CT-aacPlus and Neural Audio algorithms enable XM to deliver a consistent, superior sound experience.

In addition, Neural Audio's "stereo transcoder" algorithm preserves the imaging and spatiality of stereo and surround-sound content that XM broadcasts. So XM customers with matrix-style surround sound equipment, including Dolby technology, can receive a full surround sound experience.

### **Unparalleled Signal Coverage**

XM's digitally compressed audio content is then uplinked into outer space. Audio compression is only as effective as the ability to deliver the digital signal to the radio receivers -- XM is able to deliver its superior sound quality coast-to-coast by using two of the most powerful commercial satellites ever built, augmented by a nationwide network of more than 800 repeaters in 70 cities, the most extensive SDARS repeater network available.

XM's two Boeing 702 satellites, "Rock" and "Roll," deliver more than twice as much total satellite power of any other satellite radio service, thus only two are needed. The satellites are "parked" in geostationary orbits aligned with the east and west coasts of the United States and each broadcasts the full 100-channel service to all XM radios across the country.

Geostationary orbits are used by the majority of communication satellites today. This proven technology offers outstanding signal stability and, with two satellites in geostationary orbits, XM can provide the most consistent "spatial diversity" to ensure reliable reception. Geostationary orbits also allow XM to use shaped-beam broadcasting that focuses the highest power where it's needed most, in the largest population areas.

Finally, XM devotes bandwidth to error correction and concealment. The result is an extremely reliable delivery system that minimizes momentary signal losses from interfering with the continuous flow of music.

The combination of ultra-high powered satellites, critically important to penetrate foliage in heavily shaded suburban and rural areas, and an extensive ground-based repeater system, providing consistent coverage in cities, provides unparalleled signal coverage for the car and home in urban and rural areas alike.

### **XM's Proven Chipset Technology**

The third key component of the XM end-to-end system is its acclaimed chipset technology imbedded in XM-capable radios. XM and its technology partners STMicroelectronics and the Faunhofer Institute, world leaders in their field, created two custom integrated circuits that have worked flawlessly. They process the satellite and repeater signals and decode the music, speech and data to ensure an outstanding multimedia experience.

XM's chipset technology execution and integration into radio production enabled the company to launch nationwide over 45 days in the fall of 2001. Due in large part to its proven chipset technology, XM was the first company to launch its product at electronic retail outlets nationwide, offering products for both the car and home. XM was also the first and is currently the only company to offer satellite radio as a factory-installed option in new cars, which require an extensive chipset validation process. General Motors was the first automaker to roll out XM in new cars, beginning in 2002 Cadillac Seattles and Devilles and expanding to twenty-five 2003 models later this year.

### **About XM**

XM (Nasdaq: XMSR) is transforming radio, an industry that has seen little technological change since FM, almost 40 years ago. XM's programming lineup features 100 coast-to-coast digital channels: 71 music channels, more than 30 of them commercial-free, from hip hop to opera, classical to country, bluegrass to blues; and 29 channels of sports, talk, children's and entertainment. XM well exceeded most Wall Street analyst expectations for first quarter subscriber growth, ending with more than 76,000 total subscribers as of March 31, 2002. XM was named 2001 "Product of the Year" by *Fortune*, an "Invention of the Year" by *Time* and won *Popular Science's* 2001 "Best of What's New" Grand Award in the electronics category. XM won several awards at the 2001 CES, including "Best of CES" in the automotive category.

General Motors in November rolled out factory-installed Delphi-Delco XM radios in Cadillac Deville and Seville models, and will expand to a total of 25 Buick, Cadillac, Chevrolet, GMC, Olds and Pontiac models this year. Isuzu dealers will begin to offer XM radios to customers later this month. XM will be available as an option this coming fall on six Infiniti and Nissan 2003 models as well a future Audi and Volkswagen models. XM radios are available at major electronics retailers nationwide. Leading manufacturers such as Sony, Alpine and Pioneer offer a broad array of XM radios that easily enable any existing car stereo system. XM's strategic investors include America's leading car, radio and satellite TV companies -- General Motors, American Honda Motor Co. Inc., Clear Channel Communications and DIRECTV. For more information, please visit XM's web site: <http://www.xmradio.com>.

**About Coding Technologies**

Coding Technologies, the Swedish-German technology leader in audio coding, is developing and implementing unique audio compression technologies for the broadcasting, Internet and telecommunication markets. Coding Technologies' SBR™ (Spectral Band Replication) technology is used in the MP3 successor mp3PRO as well as in the highly efficient coding method CT-aacPlus™. It is part of open multimedia standards like Digital Radio Mondiale (DRM) and is currently under standardization in MPEG-4. The company's customers include system designers, chip/device manufacturers and content providers.

Coding Technologies, a privately held company with offices in Stockholm, Sweden, and Nuremberg, Germany, combines the exceptional skills of a Swedish company specialized in audio compression technologies and a spin-off from the renowned Fraunhofer Institute for Integrated Circuits, the inventor of MP3.

For more information, visit <http://www.codingtechnologies.com>.

For more information on mp3PRO, please visit <http://www.mp3PROzone.com>

**About Neural Audio**

Neural Audio, Inc. is a research lab that pioneered future generation audio by merging neural networks with the physics of sound. The company develops innovative audio technology for improving the human listening experience and is the first to apply advanced neural networks for commercial use. Headquartered in Seattle, Washington and privately held, Neural Audio's state-of-the-art products are used by leading companies to create an extraordinary listening experience. For more information about Neural Audio, please visit our website at [www.neuralaudio.com](http://www.neuralaudio.com) or contact a Neural Audio representative at 206.623.0102.

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*Factors that could cause actual results to differ materially from those in the forward-looking statements in this press release include uncertainties associated with demand for the company's service, the company's dependence on third party vendors, its continuing need for additional financing, as well as other risks described in XM Satellite Radio Holdings Inc.'s Form 8-K filed with the Securities and Exchange Commission on 4-8-2002. Copies of the filing are available upon request from XM Radio's Investor Relations Department.*