NEC Introduces Melody Chip for Mobile Phones with 3D Positioning Technology

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NEC Electronics today introduced the µPD9971 melody chip for mobile phones, which offers a superior three-dimensional positioning technology, sound effects, and an industry-first 128 polyphonic tones. The combination of features helps mobile phone manufacturers deliver dynamic sound quality and realism for feature-rich applications such as games.

The latest addition to NEC Electronics' lineup of melody chips achieves state-of-the-art surround sound with the inclusion of FueTrek's three-dimensional (3D) positioning technology, which processes sound so that it seems to come from four different positions, from just two speakers on the mobile phone. In addition to this positioning technology, the µPD9971 melody chip includes 128 polyphonic tones – twice as many as are available in the most advanced melody chips today – encouraging the development of even richer sound content.

Seven on-chip audio effects (pitch bend, vibrato, delay, reverb, chorus, compression and Doppler effect) bring sound qualities previously unavailable to mobile phones. The combination of these advanced features enables new possibilities in sound-based applications. For example, users would be able to hear a car realistically "zooming" from the right side to the left side of the screen.

The chip is also compatible with the Mobile Extensible Music Format (Mobile XMF) as well as Standard MIDI Files (SMF). Compatibility with these industry standard audio formats facilitates software and

application development, allowing audio files created on personal computers to be used in mobile phones, without the need to re-create or significantly modify the files.

As mobile phones increase in complexity, applications that rely on sound such as games, downloadable ring tones, and videoconferencing are becoming increasingly feature-rich as well. With the μPD9971 and future additions to the company's lineup of melody chips for mobile phones, NEC Electronics aims to meet the needs of today's mobile phone designers and facilitate the evolution of audio applications and content.