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Welcome To DTS:X - Open, Immersive And Flexible Object-Based Audio Coming To Cinema And Home

Next-Generation Technology Gives Content Creators, Cinema and Home Theater Owners More Control than Ever; Audiences Will Experience the Richest, Most Realistic Soundscape Possible

CALABASAS, Calif. (April 9, 2015) – [DTS, Inc.](#) (Nasdaq: DTSI), a global leader in audio technology solutions, has unveiled further details about DTS:X, its open, next-generation, object-based, multi-dimensional audio technology. DTS:X replicates a real-world sound environment that transports the audience into a new dimension of sound immersion by delivering truly captivating entertainment experiences in the cinema and at home. The technology also provides numerous customization options for cinema and home theater owners.

Unlike existing surround sound systems, DTS:X is not tied to prescribed speaker configurations or a specific number of audio channels. DTS:X adapts to the viewing environment, allowing for a flexible speaker configuration that best fits the viewing space. DTS:X more accurately conveys the fluid movement of sound to create a richer entertainment soundscape than has previously been possible by moving sound objects to and through specific locations within – in front of, behind, above and beside the audience, precisely where the mixer placed them.

“DTS:X is built on the foundation of providing an open, adaptable solution for content creators, cinemas and homes to fulfill our goal of bringing immersive audio to as many people around the world as possible,” said Jon Kirchner, chairman and CEO of DTS, Inc. “Until recently, sound in movie theaters and in our homes has been dictated by a standardized speaker layout. Through the use of object-based audio, DTS:X is able to scale immersive soundtrack presentations across a wide range of playback systems, from efficient to extravagant, while staying true to the content creator’s vision. This approach delivers the most authentic three-dimensional audio experience ever, making the audience feel as if they are in the center of the action.”

DTS:X + CINEMA

In 1993, DTS revolutionized cinema sound, delivering “Jurassic Park’s” award-winning 5.1-channel soundtrack on CD-ROM, which was synchronized to the picture using a time code printed on the film. Twenty-two years later, DTS:X, the industry’s newest audio solution, is no longer limited to channels or tied to a speaker layout and is now delivered as part of the Digital Cinema Package.

The foundation of DTS:X is MDA, DTS’ license fee-free, open platform for creation of object-based immersive audio. MDA gives movie studios unprecedented control over the specific placement, movement and volume of sound objects. The platform also enables sound engineers to “mix once” for both immersive and conventional cinemas in a combined object- and channel-based audio format, allowing content to be easily distributed beyond the theater for streaming, broadcast, optical media and more.

“MDA is DTS’ license fee-free contribution to the professional audio community for mixing and storage of immersive audio content,” said Kirchner. “MDA fits perfectly within today’s production workflow, and a combination of MDA and DTS:X provides a complete end-to-end workflow, from creation to exhibition.”

The DTS:X licensing program in cinema will offer theater owners the opportunity to provide their audience the most compelling, immersive sound experience possible. This can be achieved for almost any room configuration by installing DTS:X-approved equipment and working with the recommended speaker installation guidelines.

To ensure quality and provide flexibility within the DTS:X program, DTS has partnered with industry-leading server, sound rendering and processing companies. GDC Technology, QSC and USL, have developed and made available DTS:X-ready components that process and render MDA files.

- ┆ GDC Technology – develops, manufactures and sells digital cinema servers and provides a comprehensive suite of digital cinema products, services and solutions for exhibitors and distributors
- ┆ QSC – designs and manufactures professional audio systems and solutions for professional installed, portable, production and cinema sound customers worldwide
- ┆ USL – is engaged in the design, manufacture, and sale of motion picture audio equipment and sound processors

GDC Technology and Carmike Cinemas are initial partners integrating DTS:X into theaters in the US and abroad.

GDC Technology boasts the largest installed base of digital cinema servers in the Asia-Pacific region, and the second largest, globally.

- | GDC is the worldwide DTS:X certification agent with an exclusive in Asia
- | GDC will make MDA firmware updates available to theater owners over to its existing installed server base of more than 40,000 servers starting in May 2015
- | GDC will provide DTS:X installation and certification for approximately 350 screens throughout Asia beginning in May 2015

"GDC is committed to offering state-of-the-art technology to its customers. We chose DTS:X because we believe it will transform the movie theater experience for audiences around the world," said Dr. Man-Nang Chong, founder and CEO of GDC Technology. "Theater owners will appreciate the easy integration and flexible solutions that DTS:X offers as they upgrade their screens to this superior sound experience. Audiences win too. Because of the flexibility in speaker layout that DTS:X offers, immersive audio is now available to a larger number of theaters of all sizes than ever before."

Carmike Cinemas, a leader in digital cinema and 3D cinema deployments and one of the largest motion picture exhibitors in the US, will upgrade selected theaters to DTS:X beginning in Spring 2015.

- | Carmike 15 (Columbus, Ga.)
- | Carmike Movies ATL 278 (Atlanta, Ga.)
- | Chapel Hills 13 (Colorado Springs, Colo.)
- | Rosemont 18 (Rosemont, Ill.)
- | Thoroughbred 20 (Franklin, Tenn.)
- | Thousand Oaks 14 (Thousand Oaks, Calif.)
- | Valley Bend 18 (Huntsville, Ala.)

"We believe in the open platform philosophy of DTS:X and are excited to be among the first theater partners to be onboard," said Fred Van Noy, senior vice president and chief operating officer, Carmike Cinemas. "The flexibility of DTS:X allows us to deliver an immersive experience to a broader audience. We love the fact that DTS:X adapts not only to numerous room designs; it also enables us to continue working with our existing equipment provider, QSC."

DTS is presently working with several major studios and mixing stages in Los Angeles, Northern California and Canada that are evaluating DTS:X. DTS:X content announcements will be made by the studios when ready, in alignment with DTS.

DTS:X + AVRs

Manufacturers representing nearly 90 percent of the home AVR and surround processor market will launch DTS:X-enabled products beginning in early Summer 2015, with additional manufacturer and model announcements to follow in the coming months. Confirmed AVR partners include:

- | Denon – AVR-X7200W available now / DTS:X firmware upgrade later in 2015
- | Integra – launching several models by Fall 2015
- | Marantz – AV8802 available now / DTS:X firmware upgrade later in 2015
- | Onkyo – launching several models by Fall 2015
- | Outlaw Audio – details to follow
- | Pioneer – details to follow
- | Steinway Lyngdorf – P200 Surround Sound Processor available Summer 2015 / DTS:X firmware upgrade in Fall 2015
- | Theta Digital – Casablanca IVa available Summer 2015
- | Trinno Audio – Altitude32 available now / DTS:X firmware upgrade Summer 2015
- | Yamaha – launching DTS:X ready models in Fall 2015

DTS:X solutions are also available for 2015 AV receiver silicon platforms representing the majority of the DSP platform market share, including Cirrus Logic, Analog Devices and Texas Instruments.

For home theater system owners, DTS:X provides personalization, flexibility and control for the most optimized listening experience possible. Key features include:

Backward Compatibility – DTS:X builds upon existing DTS-*HD* Master Audio to provide backward compatibility with existing DTS bitstreams and speaker layouts. In short, all features of DTS-*HD* Master Audio are supported and enable an immersive audio experience for older content.

- ┆ The DTS:X content is backward compatible with the DTS-*HD* decoder
- ┆ The DTS:X decoder supports DVD, Blu-ray Disc (BD) and streaming media file formats
- ┆ DTS:X can spatially reformat stereo, 5.1 or 7.1 content to take full advantage of all speakers in a surround system
 - ┆ Objects are never lost; if the object is embedded, it can be extracted and used in the rendered experience

Dialog Control – AVR owners will be able to control the volume of specific audio elements at home, such as increasing dialog volume to match their listening preferences.

- ┆ Dialog, as an object, can be lifted out from the background sounds when clarity and intelligibility are desired
- ┆ Content creators have the choice to implement this feature in their content mix

Flexible Speaker Layout – With flexible speaker layouts and remapping technology, DTS:X allows the placement of home theater speakers virtually anywhere. The freedom of object-based audio enables optimized playback on a multitude of speaker layouts, with any number of speakers. The DTS speaker remapping engine supports any speaker configuration within a hemispherical layout based around the listening position in the room.

- ┆ 2015 DTS:X AVRs can support up to 11.2 speaker output channels
- ┆ Content created for a specific speaker layout can be remapped for playback through a different layout
- ┆ Enables remapping of outputs to custom or OEM-defined speaker layouts, and remapping legacy content to new output configurations
- ┆ Support for 32 speaker locations (subject to each manufacturer's product capabilities)
- ┆ Metadata-based spatial mapping renders the ideal 3D sound image to actual speaker layouts

Lossless – DTS is known for lossless, master audio quality with no compromise, delivering dynamic bit allocation. DTS:X supports lossless encoding for the highest audio quality possible. In situations where bitrate is of high concern, DTS:X can also operate in a high-quality lossy mode.

- ┆ Supports up to 96k for object mixes
- ┆ Still supports up to 192k for stereo and multi-channel mixes
- ┆ DTS:X is true to the audio master, delivers in the highest quality and preserves its fidelity

DTS Headphone:X

As part of DTS' strategy to support the entire ecosystem of sound, from cinema to home to mobile, consumers can also access an engaging audio experience over their mobile devices with DTS Headphone:X, which enhances any ordinary pair of headphones with fully immersive surround sound. With DTS technology, even the smallest screens will sound huge. Immerse yourself at www.dts.com/dtsx and www.dts.com/headphonex.

For more information about DTS, please visit www.dts.com, or connect with DTS on [Facebook](https://www.facebook.com/DTSInc) and Twitter ([@DTS Inc](https://twitter.com/DTSInc)).

About DTS, Inc.

Since 1993, [DTS, Inc.](http://www.dts.com) (Nasdaq: DTSI) has been dedicated to making the world sound better. Through its pioneering audio solutions for mobile devices, home theater systems, cinemas and beyond, DTS provides incredibly high-quality, immersive and engaging audio experiences to listeners everywhere. DTS technology is integrated in more than two billion devices globally, and the world's leading video and music streaming services are increasingly choosing DTS to deliver premium sound to their listeners' network-connected devices. For more information, please visit www.dts.com.

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