Adaptive Digital Technologies, Inc.

Corporate Fact Sheet

Company Founded:	1994
Headquarters:	525 Plymouth Road, Suite 316
	Plymouth Meeting, Pennsylvania 19462 USA
Locations:	East and West Coast, USA

Introduction

Adaptive Digital Technologies, Inc., (Adaptive Digital) is the leading provider of voice algorithms and solutions on the Texas Instruments (TI) TMS320™ Family of DSPs, OMAP, and many ARM® processors including Cortex M-3.

Since 1994, Adaptive Digital has been providing fully optimized echo cancellation, compression, voice quality, & audio algorithms, and both DSP chips & turnkey solutions to the global market for IP and traditional telecommunications system / applications.

Our expertise is in the development of solutions that maximize voice quality as well as channel density. Adaptive Digital has now applied its voice application software expertise to the mobile digital device market. Because of our extensive knowledge of digital voice processing we are well equipped to provide Mobile device VoIP application developers the resources and support necessary for them to exceed the existing standard in mobile voice quality.

Products and Technology

Adaptive Digital's feature rich, application-specific VoIP soft chip solutions include all of the telephony, signaling, tone and voice processing (codecs), and framework necessary to each VoIP application. The solutions are built upon Adaptive Digital's field proven, carrier-class DSP Software building blocks which include: telephony algorithms, speech compression (vocoders), conferencing, and echo cancellation. Adaptive Digital's G.PAK™ integrates these algorithms into a scalable and configurable Voice-over-Packet Software Solution, turning a DSP chip into an easily controlled voice-over-packet engine.

- Configured Chip Solutions include: TMS320C55x and 'C64x solutions include: Low-End IP Phone, IP Intercom, Conferencing, Echo Cancellation, IP PBX, Transcoding, and Voice Quality Enhancement (VQE).

- TMS320C64x+ chip solutions include: High-End IP Phone, IP Gateway/PBX, Echo Cancellation (EC)/Packet EC, GSM/ITU – Wireless Voice Transcoding, High-Density Conferencing.

- OMAP35x and Stellaris® solutions include: IP Phone, IP Intercom.

OEMs and ODMs who develop sophisticated voice-centric applications find our solutions easy to integrate and well optimized for their requirements, enabling them to develop products quickly and cost-effectively.
Adaptive Digital's solutions support a low-cost product development model with short time-to-market.

VoIP Engine™ is at the core of our ARM-based VoIP applications, it provides complete PCM to packet processing. The Adaptive Digital VoIP Engine software is a software engine package that handles all the voice processing from PCM to Packet and back. Its intended use is in VoIP enabled handsets or desktop phones.

Offerings include: VoIP Engine for ARM®, AnVoice™ for Android, & iPVoice™ for iPhone®, iTouch®,, and iPad®.
VoIP Engine SW includes G.722 WB: Sound depth and clarity unprecedented in the mobile voice app market.

Adaptive Digital's products include:

- G.PAK™ - a VoIP framework that allows us to create custom VoIP software solutions on TI DSPs. When we refer to a G.PAK solution, we are referring to a case in which we use the G.PAK configuration tool to build a custom solution for you, conceivably (without customization) in mere minutes! The crucial role of achieving rapid time-to-market is facilitated through G.PAK technology.

- G.PAK-HOS™: Half-Open-Source™ DSP Reference Application - Free G.PAK evaluation software and G.PAK source code available under Adaptive Digital's unique Half-Open-Source license - a license that is more attractive to equipment manufacturers than the GNU Public License. G.PAK-HOS enables designers to rapidly build software for VoIP Gateways, PBXs, access devices, and next generation IP phone equipment.

  G.PAK bridges the gap between inflexible fixed-function chips and custom programmed solutions.

- Adaptive Digital's VoIP Engine for the Android /ARM is a software package that handles the processing needed to transform PCM samples to VoIP packets and VoIP packets to PCM samples. In other words, it provides all the voice processing necessary to VoIP-enable an Android/ARM application.

- Certified carrier class G.168 Echo Canceller achieves excellent voice quality while leading the industry in CPU and memory utilization efficiency. In addition, Adaptive Digital's echo canceller has been deployed in over 40 countries and in a wide variety of applications. To this date Adaptive Digital is the only Texas Instruments Third Party member to have an AT&T Certified G.168 compliant echo canceller.

- G.168 Plus™ Packet Echo Canceller has the ability to handle up to 512 msec of round trip delay, a full 384 msec beyond the ITU requirement. G.168 Plus™ Packet echo canceller is packet-loss aware and is able to mitigate the specific effects that packet loss has on echo cancellation in the VoIP network.

- All of the ITU G.XXX voice compression algorithms and many of the ETSI and 3GPP compression algorithms.

- Voice Quality Enhancement algorithms: Echo Cancellation – G.168 Line, Network, & Packet, G.168Plus™ Packet EC (256 to 512 msec tail length) Acoustic Echo Cancellation (AEC) & AEC Gen 4 (NB/WB), Noise reduction Gen 1 & 2, Noise Suppression, and Comfort Noise generation (CNG).

- Audio algorithms including: AAC, AAC LC, AAC LD, MP3 decode, G.719, G.722.1 WB, and WMA decoder.

- Full line of Telephony algorithms: Tone detect and suppress, DTMF, AGC, Arbitrary Tone detect, R1/R2 detect, Voice Activity Detection (VAD), Tone Relay, and High Density Conferencing (NB/WB).

- Military and Defense codecs: MELP/MELPe, CVSD, LPC, AES, G.729D, Noise Reduction. Encryption algorithms – AES, SRTP.

- Modem software: Caller ID, Fax Relay, Relay Software, and G.165 detect.

Services

- Adaptive Digital provides support throughout all project phases; customers have access to our technical team directly over the phone or via email. Our commitment to our product and our customer is second to none.

- DSP Software consulting: Our engineering team has over twenty-five years experience in practical and theoretical aspects of DSP Software, and Communications.

- The DSP Resource Wizard™ is a free downloadable tool, which provides design engineers with on-the-fly channel density calculations of DSP software as applied to Texas Instruments TMS320™C5000, and 'C6000 families of DSPs. To this date we have over five hundred registered users.

Our extensive knowledge of digital voice processing is proven by our outstanding reputation and repeat customer base. A sampling of our Customers include: British Telecom, Cisco Systems Inc., Cantata Technology, Digium®, General Dynamics, Motorola, Northrop Grumman, Sonus, and Texas Instruments.

Adaptive Digital is a member of ARM's Connected Community, ARM's Solution Center for Android (SCA), and a twelve year member of Texas Instruments' Third Party Developer Network.