GSM
eXpressDSP™-Compliant Third-Party Algorithms
Updated 4Q 2003

Compliant Algorithm	Generation	Third-Party Vendor
GSM AMR Decoder	C55x	HelloSoft
GSM AMR Decoder	C55x	Emuzed
GSM AMR Encoder	C55x	Emuzed
GSM AMR Encoder	C55x	HelloSoft
GSM AMR Wideband Decoder	C55x	Emuzed
GSM AMR Wideband Encoder	C55x	Emuzed
GSM Enhanced Full-Rate Decoder	C54x	SIAL
GSM Enhanced Full-Rate Decoder	C62x	Signals + Software
GSM Enhanced Full-Rate Encoder	C54x	SIAL
GSM Enhanced Full-Rate Encoder	C62x	Signals + Software

Compliant Algorithm	Generation	Third-Party Vendor
GSM Full-Rate Decoder	C54x	Bayer DSP
GSM Full-Rate Decoder	C55x	Bayer DSP
GSM Full-Rate Decoder	C62x	Signals + Software
GSM Full-Rate Encoder	C54x	Bayer DSP
GSM Full-Rate Encoder	C55x	Bayer DSP
GSM Full-Rate Encoder	C62x	Signals + Software
Tetra Decoder	C54x	Deltacom Electronics
Tetra Encoder	C54x	Delatcom Electronics
WAV-GSM Voice Compression	C64x	Softier

Indicates new algorithm

REAL WORLD SIGNAL PROCESSING™

Complete Listing of eXpressDSP™-Compliant Third-Party Algorithms
Updated 4Q 2003

Third Party		C2000™	C5000™	C6000™	Audio	DMC	Encryption	Fax	GSM	Protocol Stacks	Speech	Telephony	VB Modems	Video & Imaging	Vocoders	Wireless
A DSP House	http://www.adsphouse.com			X								X				
Acoustic Technologies, Inc.	http://www.acoustictech.com		X		X											
Adaptive Digital Technologies, Inc.	http://www.adt-inc.com		X									X			X	
Algo Vision Systems GmbH	http://www.algovision.com			X										X		
Advanced Recognition Technologies, Inc.	http://www.artcomp.com		X								X					
Alango	http://www.alango.com/		X		X											
Aliph Com	http://www.aliph.com		X		X											
Alliance Technologies Group, Inc. (ATG)	http://www.atgroupinc.com		X	X												X
ATEME	http://www.ateme.fr	X	X	X										X		
Bayer DSP	http://www.dsp-bayer.com		X						X	X		X				
Blip-X	http://www.blip-x.com		X	X										X		
Clarity, LLC	http://www.clarityco.com		X								X					
Commetrex Corp.	http://www.commetrex.com		X	X				X				X			X	
COMSIS	http://www.comsis.fr			X								X			X	
Consystant Design Technologies, Inc.	http://www.consystant.com			X										X		
Creative DSP Solutions, Inc.	http://www.creativedsp.com		X		X											
CuTe Solutions	http://www.cutesolinc.com/			X	X											
Cybernetics Infotech	http://www.cybit.com		X												X	
D2 Technologies Inc.	http://www.d2tech.com		X									X			X	
D+R Electronica B.V.	http://www.d-r.nl			X	X											
DACS Software Pvt. Ltd.	http://www.dacsindia.com		X									X				
Danlaw Technologies India, Ltd.	http://www.danlawtechnologies.com		X		X										X	
Deltacom Electronics	http://www.dce.bg		X						X							
Digilab2000 s.r.l.	http://www.digilab2000.it			X										X		
Dilithium Networks	http://www.dilithiumnetworks.com			X	X									X		
DResearch	http://www.dresearch.de			X										X		
DSP Global, Inc.	http://www.dspglobal.com		X									X				
DSP Techniques	http://www.dsptechniques.com		X		X											
DSP Wizard	http://www.dspwizard.com		X												X	
DSPecialists GmbH	http://www.dspecialists.de		X	X	X											
e-Infochips Inc.	http://www.einfochips.com			X	X											
easytools s.l.	http://www.easytools.es		X				X									
EI CREBOUW	http://www.eicrebouw.fr		X										X			X
Electronic Design Associates, Inc.	http://www.useda.com		X		X											
Emuzed, Inc.	http://www.emuzed.com		X	X					X						X	
Encore Software Ltd.	http://www.ncoretech.com		X	X											X	
Enounce Inc.	http://www.enounce.com		X		X											
eSecurium	http://www.esecurium.com		X				X									
Ethentica by Security First Corp.	http://www.ethentica.com		X											X		
Eyematic Interfaces, Inc.	http://www.eyematic.com			X										X		
Floreat	http://www.floreatinc.com		X												X	
Fonix Corp.	http://www.fonix.com		X								X					
Fraunhofer IIS	http://www.iis.fhg.de			X	X											
GAO Research Inc.	http://www.gaoresearch.com		X					X				X	X		X	
GDA Technologies, Inc.	http://www.gdatech.com		X	X										X		
Global IP Sound AB	http://www.globalipsound.com		X												X	
Heinrich-Hertz Institut GmbH	http://www.hhi.de			X										X		
HelloSoft, Inc.	http://www.hellosoft.com		X						X			X			X	
Hyperception	http://www.hyperception.com		X	X								X			X	

Indicates third party has new algorithm

Third Party		C2000™	C5000™	C6000™	Audio	DMC	Encryption	Fax	GSM	Protocol Stacks	Speech	Telephony	VB Modems	Video & Imaging	Vocoders	Wireless
		TI Device			**Application**											
IdenCom	http://www.idencom.com/			X										X		
IdentAlink	http://www.identalink.de/			X										X		
ILLICO	http://www.illico.com		X	X				X					X			
Image Power, Inc.	http://www.imagepower.com		X	X										X		
Imagine Technology, LLC	http://www.imaginetechnology.net		X	X	X		X					X	X		X	
Indesign, LLC	http://www.indesign-llc.com	X		X												
Ingenient Technologies, Inc.	http://www.ingenient.com			X										X	X	
Ittiam Systems Private Limited	http://www.ittiam.com		X	X	X						X			X	X	
LME – Microelectronics Lab of CEFET-PR	http://www.lme.cpdtt.cefetpr.br		X												X	
Lucent Technologies	http://www.lucent.com		X								X				X	
Mango DSP, Ltd.	http://www.mangodsp.com			X										X		
Mecoso Technology, Inc.	http://www.mecoso.com			X										X		
MESi	http://www.mesi.net		X						X			X	X			
MIKET DSP Solutions	http://mikets@telus.net		X								X					
Motorola (BlueWave Systems)	http://www.bluews.com			X								X			X	
MTI s.r.l.	http://www.mtionline.it		X								X				X	
Netbricks	http://www.netbricks.net/		X								X					
NeuroDynamics, Ltd.	http://www.neurodynamics.com		X											X		
NeuVoice	http://www.neuvoice.com		X								X					
Noise Cancellation Technology (NCT Group, Inc.)	http://www.nctclearspeech.com/			X							X					
NTRU Cryptosystems, Inc.	http://www.ntru.com		X					X								
Octiv Inc.	http://www.octiv.com		X		X											
On2 Technologies	http://www.on2.com			X										X		
Phillips Speech Processing	http://www.speech.be.phillips.com		X								X					
Pivot Signal Processing, Ltd.	http://www.pivot-dsp.com			X								X			X	
Planning Systems, Inc.	http://www.plansys.com		X								X					
Prodys S.L.	http://www.prodys.net			X										X		
RadiSys Corp.	http://www.radisys.com			X								X			X	
RoadComm, Inc.	http://www.road-com.com		X								X					
Romsey DSP	http://www.romseydsp.com		X												X	
Sasken Communication Technologies Ltd.	http://www.sasken.com		X											X		
Sensaura	http://www.scipher.com		X		X											
SIAL Ltd.	http://www.dsp.sut.ru/sial/		X	X					X			X			X	
Siemens AG Austria	http://www.pse.siemens.at		X		X											
Signals + Software Ltd.	http://www.signalsandsoftware.com		X	X					X			X	X		X	
SignalWorks	http://www.signalworks.com		X		X											
Signion Systems Pvt. Ltd.	http://www.signion.com		X					X								X
SigNumerix, Inc.	http://www.signumerix.com		X									X	X			
Snapshield Ltd.	http://www.snapshield.com		X	X			X									
Softier Ltd.	http://www.softier.com/			X					X					X		
Sound ID	http://www.soundid.com		X		X											
Spatializer Audio Laboratories, Inc.	http://www.spatializer.com		X		X											
Spectral Design	http://www.spectral-design.com			X	X											
Spectrum Signal Processing, Inc.	http://www.spectrumsignal.com			X								X				
Speech Technology Center	http://www.speechpro.com		X								X					
SPIRIT CORP.	http://www.spiritDSP.com		X		X				X		X	X	X		X	
SRS Labs, Inc.	http://www.srslabs.com		X	X	X											
Stocker Ing. Buero	http://friedrich.h.stocker@t-online.de		X		X											
Streambox, Inc.	http://www.streambox.com			X										X		
Surf Communication Solutions Ltd.	http://www.surf-com.com			X				X				X		X		
Syspac Ltda.	http://www.syspac.com.br		X									X			X	
Tata Elxsi Limited	http://www.tataelxsi.com			X	X											
Technosoft	http://www.technosoft.ch/	X				X										
Tecteon Plc	http://www.tecteon.com/			X								X				
Telisma SA	http://www.telisma.com		X								X					
Troy Group, Inc.	http://www.troygroup.com		X													X
Two Pi	http://www.two-pi.com/		X		X											

Indicates third-party has new algorithm

RWSPREAL WORLD SIGNAL PROCESSING™

Third Party		TI Device			Application											
		C2000™	C5000™	C6000™	Audio	DMC	Encryption	Fax	GSM	Protocol Stacks	Speech	Telephony	VB Modems	Video & Imaging	Vocoders	Wireless
UB Video, Inc.	http://www.ubvideo.com		X	X										X		
UFMG–Universidade Federal de Minas Gerais	http://www.cpdee.ufmg.br	X				X										
Verance Corp.	http://www.verance.com		X				X									
Wavemakers Inc.	http://www.wavemakers.com		X								X					
Windmill Innovations	http://www.windmill-innovations.com		X	X						X						
Wipro Ltd.	http://www.wipro.com		X												X	
Z Tecnologia Communicacao Ltda.	http://www.ztec.com.br		X										X			
Zandiant Technologies, Inc.	http://www.zandiant.com		X		X											

Indicates third-party has new algorithm

Complete Listing of eXpressDSP™-Compliant Third-Party Plug-Ins
Updated 4Q 2003

Name	Contact	Stage of the Development Cycle				TI DSP Platform		
		Application Design	Code & Build	Debug	Analyze & Tune	C6000™	C5000™	C2000™
Borland Corporation	http://www.borland.com							
CodeWright			X			X	X	
Elanix	http://www.elanix.com							
SystemView's Real-Time DSP Architect		X	X			X	X	
Hyperception, Inc.	http://www.hyperception.com							
eXpressDSP™ Component Wizard		X				X	X	X
Visual Application Builder		X	X		X	X	X	X
National Instruments	http://www.ni.com							
LabView DSP Test Integration Toolkit for TI DSP		X		X	X	X	X	X
Pentek, Inc.	http://www.pentek.com							
SwiftNet Debug Manager		X				X		
SwiftNet Project Manager		X				X		
Rational Software Corporation	http://www.rational.com							
Rational Test Real-Time				X	X	X		
Technosoft	http://www.technosoft.ch							
Control Panel Global Variable Visualizers for DMCs					X			X
Graphical I/O Registers Viewer for DMCs					X			X
Data Logger Tool for DMCs					X			X
Reference Generator for Motion Reference				X	X			X
The MathWorks, Inc.	http://www.mathworks.com/							
Filter Design Toolbox		X	X			X	X	X
MATLAB® Link for CCStudio Development Tools		X	X	X	X	X	X	
SIMULINK® Embedded Target for C6000™ DSP Platform		X	X	X	X	X		
Vector Software, Inc.	http://www.vectors.com							
VectorCAST for CCStudio				X		X	X	X
Visual Solutions Incorporated	http://www.vissim.com							
VisSim™-CCStudio Plug-In		X	X	X		X		X

X – supported

Note: This may not be a complete list of available Third-Party eXpressDSP-compliant plug-ins. For the most up-to-date list, please go to **www.dspvillage.ti.com/plug-ins**

A DSP House

http://www.adsphouse.com
info@adsphouse.com

At A DSP House, the mission is to simplify the process of using DSP software starting with the licensing process and continuing through product development and deployment. A DSP House develops and licenses telephony and modem algorithms. In addition, A DSP House offers engineering services in the area of DSP software development on the TI C5000 and C6000 generation of DSPs. The company understands the importance of bringing a quality product to market in a timely fashion, and is committed to helping our customers achieve success in the marketplace.

Acoustic Technologies

http://www.acoustictech.com/
sales@acoustictech.com

Acoustic Technologies' SoundClear™ DSP
Software for dramatically improved sound quality is eXpressDSP™-compliant for both the TMS320C54x™ and TMS320C55x™ generations of TI DSPs. The SoundClear audio processing enables natural two-way communications in telephony and hands-free applications, with echo cancellation, noise reduction, and sophisticated control. The SoundClear software provides:
• More than -42 dB total echo rejection
• Fast convergence of less than 50 ms
• Ultra Long Echo Tail™ rejection up to 1500 ms
• No distortion or speech clipping
• Dynamic adaptation to changing conditions such as noise, speech levels, or delay
• True full-duplex speakerphone operation

Adaptive Digital Technologies, Inc.

http://www.adaptivedigital.com
info@adaptivedigital.com

Adaptive Digital's current products provide compression and signal-processing features which enable telecommunications equipment to transfer up to audio quality signal bandwidth over conventional telephone lines and wireless communication links. All of these capabilities can be provided in real-time and at toll-quality standards. Adaptive Digital's current product applications include echo cancellation, telephony algorithms, voice compression, audio compression, and data transfer.

Adaptive Digital's products can be provided as a product development building block, or as a turn-key solution to your signal-processing needs. Custom Adaptive Digital products can be provided to meet your special hardware and software requirements including input and output information format, secondary processing, real-time constraints, and 'C'-callability.

Alango

http://www.alango.com/
info@alango.com

Alango's Audio Signal Processing technologies improve sound quality by reducing different types of noises, canceling acoustical and electrical echoes and dynamically equalizing signal volume and spectrum to provide the best speech and music intelligibility in changing and noisy environments. Their sound technologies are distinguished by high voice fidelity, very low signal delays and relatively modest hardware requirements.

Algo Vision Systems GmbH

http://www.algovision.de
dspinfo@algovision.de

Algo Vision is made up of four enterprises that are organized under the Algo Vision plc.

The Group is a technology-based group whose primary activity is developing and marketing data compression/decompression products and providing solutions for the transmission of image and video data. Its products, which are in compliance with relevant existing standards, allow high-speed and high-quality still image transfer and audio/video communication.

The Group has developed products based on data compression/decompression software technology for high-speed, high-quality still image and video transfer and computer boards, which are based on Texas Instruments DSP TMS320C80. They enable end users to engage in visual communication. The Group's technology is in compliance with standards set by the International Telecommunication Union (ITU).

Aliph Com

http://www.aliph.com
info@aliph.com

Founded in 1998, Aliph is a leading developer of acoustic noise suppression, echo-cancellation, and front-end speech processing tools for mobile phones, headsets and in-car audio systems. Aliph's proprietary technology removes any type of noise (or echo), at any noise level, from any direction.

The benefits are tremendous: unparalleled voice quality; increased capacity for wireless networks; speech recognition accuracy of 95%+ in all environments; longer battery life; mobile earpieces have superior voice quality and no longer need a microphone boom.

Aliph works with a variety of partners, including handset manufacturers, wireless networks, headset OEMs, telematics service providers, and speech recognition vendors.

ART

http://www.artcomp.com
yakov@artcomp.com

ART, Advanced Recognition Technologies Inc., is the acknowledged pioneer and market leader in Natural Human User Interface focused on embedded speech and handwriting recognition for mobile devices. ART markets superior technology innovations developed for the minimal processing power and limited memory environments of cellular phones, mobile communicators, PDAs, and automotive systems.

The first to introduce successful deployment of Name Dialing ability to the mass-market cellular handsets, ART has generated a decade of award winning, software-only based solutions. Now ART develops and markets a complete range of proprietary technologies designed for use on all the most widely employed platforms for cellular phones, smart phones, mobile communicators, PDAs, automotive systems, and more. Established in 1990 and US-based with sales offices on the east and west coasts, ART is active in the US, Europe, Asia and Israel, where it maintains a wholly owned R&D subsidiary, ART Ltd.

Alliance Technologies Group

http://www.atgroupinc.com
info@atgroupinc.com

Alliance Technologies Group, Inc. (ATG) has been successfully solving customers' development issues since 1996. ATG provides a one-stop shop for the complete range of product development engineering services including: RF, DSP, embedded, electrical design, mechanical design, and test systems.

To expedite product development ATG also maintains a set of in-house intellectual property, including: eXpressDSP™ compliant 3G Symbol Rate Processing Algorithm Library, GSM, GPRS, Edge, IS-136B, IS-136+, and IS-136 Outdoor. ATG is constantly developing new IP. Look for ATG's wireless add-on peripherals for TI development boards in 2002.

ATEME

http://www.ateme.com/gb/home/home.html
sales@ateme.fr

Ateme, TI's leading European third party in imaging, is an innovative company localized in the Paris Region's major electronics industries heartland.

Bayer DSP

http://www.dsp-bayer.de
mail@dsp-bayer.de

Bayer DSP Solutions was founded early in 1995 and offers tools, hardware, software and solutions for digital signal processing applications. Bayer DSP is a consultancy and design team for hardware and software, active in many areas of traditional (telecom) and emerging markets.

Bayer DSP has developed a number of standard algorithms such as DTMF detection and generation, call progress tone detection and generation, GSM full-rate speech codec, Line Echo Cancellation (G.165), and Acoustic Echo Cancellation (G.167) as well as HDLC controllers, all available as eXpressDSP™ objects for Texas Instruments C54x™ DSP, C55x™ DSP, and OMAP™ platforms.

Blip-X

http://www.blip-x.com
Andre.Brown@blip-x.com

Blip-X has a unique, patented video compression technology to reduce the bandwidth needed by tradition codecs such as MPEG4, enabling high-quality video over low-bandwidth connections. Their algorithms, Blip-stream, are part of a patented technology that reduces the bandwidth requirements of all video carrier media by 50%, without loss of quality.

Clarity

http://www.clarityco.com/home.html
email@clarityco.com

Clarity's award winning "Clear Voice Capture™" (CVC™) toolbox of novel and proprietary software products improve the quality and performance of any voice-based application.

Clarity's CVC family of algorithms include a one microphone solution (OMS), two microphone solution, clear echo cancellation (CEC), feedback cancellation (FBC), and a Clear Hands-Free solution (CHF).

Clarity's Audio Front End (Café) is a stand-alone board with DSP that lets evaluators hear how Clarity's software will enhance the quality of their products. The module is an excellent platform to develop and run software on the TI C5000™ platform of processors.

Commetrex

http://www.commetrex.com
sales@commetrex.com

Commetrex has the technologies to speed your telecommunications product to market while reducing development expense. Start with a comprehensive library of fax, voice, and telephony technologies. But you will also need a streams framework. You can spend several developer-years or license OpenMedia™. It supports any number of channels and algorithms, dynamic resource allocation, and multiple processing rates, all without pre-emption. If your architecture spans multiple processors, you will need a system-level framework. OTF Kernel is client-server telephony middleware that keeps you in control of your product platform while maintaining vendor independence. Combine all of this with Commetrex' product line of PCI boards and/or OpenEndpoint™, our complete IP endpoint software.

COMSIS

http://www.comsis.fr/
comsis@starnet.fr

COMSIS, founded four years ago, develops software solutions for telecommunications, particularly in the areas of telephony, modems, vocoders, radio communications, and Wireless LAN. The company's engineers are highly skilled in the design and the development of base band modules of telecommunications standards including source coding, channel coding, synchronization, channel estimation, equalization, etc.

COMSIS designs and develops algorithms to be fully compliant with the recommendations and tests the DSP, Microcontroller, VHDL implementation using test vectors and test equipment. Except the vocoders C source codes are available on the ETSI or ITU web site, all the algorithms based on C codes, C/DSP or C/Microcontroller are COMSIS intellectual property.

Consystant Design Technologies

http://www.consystant.com
mark.griffin@consystant.com

While a number of opportunities exist in the market for the company's technology, Consystant has focused it energies on the network processing market. The company created its StrataNP software development environment network processors. StrataNP accelerates the overall software development process. The open environment allows easy integration with network processor software development kits to provide a seamless environment and to access critical performance data. The component-based platform easily incorporates vendor supplied, third party and proprietary components and applications to speed software development and increase flexibility needed for competitive differentiation. With StrataNP, network equipment designer can rapidly develop their data plane applications to meet critical performance concerns, market windows and system upgrade needs.

Creative DSP Solutions

http://www.creativedsp.com
info@creativedsp.com

Creative DSP Solutions, Inc. (CDSPS) is recognized in developing digital signal processing algorithms, providing DSP application software solutions, and consulting services for different real-time applications.

Creative DSP Solutions' core business includes digital signal processing algorithms analysis and research, DSP applications realization and implementation, customer software development, and technical consulting in the areas of active noise control, speech processing, audio processing, wireless, voice, and data communications.

CuTe Solutions

http://www.cutesolinc.com/
sales@virtualipgroup.com

CuTe Solution was established in 1994. It is a leading Design Foundry™ providing intellectual property (IP) development, licensing, and integration services as well as front-end and back-end design services including firmware development for embedded system solutions. The company offers a growing library of silicon-proven, synthesizable, intellectual property cores for implementation in Field Programmable Gate Arrays (FPGAs), Application Specific Integrated Circuits (ASICs), and Customer-Owned Tooling (COT) Very Large Scale Integration (VLSI) designs. Custom intellectual property development is available through CuTe Solutions' development partner, Qualcore Logic Pvt. Ltd. in Hyderabad, India.

Cybernetics Infotech

http://www.cybit.com
sales@cybit.com

CYBIT is an industry leader in providing integrated mobile media solutions for the market of voice/music storage, communication, command, and playback applications. CYBIT develops state-of-the-art digital speech/audio compression, recognition, and transmission technologies.

CYBIT also offers ODM solutions from chip packages, modules, to ready-for-sale end products for the emerging markets of wireless Internet and mobile media.

D and R Electronica B.V.

http://www.d-r.nl/
info@d-r.nl

D&R Electronica B.V. is one of the leading companies designing and manufacturing analog and digital modular audio mixing consoles and signal processors.

D&R was founded in 1972, and its products range from high-quality D.J. mixers up to large scale, high-end customized mixing consoles for broadcast, live, recording, and post-production work.

DACS Software

http://www.dacsindia.com/
info@dacsindia.com

DACS Software Pvt. Ltd. is a company based out of Bangalore, with a customer proximity hub and subsidiary sales office in Belmont, California.

With vast expertise in various aspects of DSP architectures and development tools, DACS offers leading-edge technology products and frameworks such as:
• Code Converters – a fast and efficient migration path for applications to new architectures,
• Tool-Set Generation Technology – framework for rapid tools (simulator, debugger, compilers, etc.) development to meet the growing demands of a constantly evolving processor architecture
• DSP Virtual Machine (DSPVM) – revolutionary framework enabling DSP applications development/porting faster , better and much cheaper.
• DACS also offers a host of eXpressDSP™-compliant Echo Canceller and Speech Codec on TMS320C54x™ and TMS320C62x™ DSPs.

Danlaw Technologies

http://www.danlawtechnologies.com
akraina@danlawinc.com

Danlaw Technologies India Limited based in Hyderabad, India, is a diversified products and services company. Its engineering software division develops products and offers services the automtive sector in vehicle diagnostics, testing and messaging. The Information Technology division offers web based applications and products. It has a Research and development division primarily engaged in DSP based speech and communication technologies.

Digilab2000

http://www.digilab2000.it
info@digilab2000.it

DigiLab2000 core business is Information Communication Technology, particularly oriented on Digital Communications. Its know-how involves microcontroller and DSP hardware and software systems design, simulation and validations of Telecommunications systems providing a complete solution in the field of Telecommunication.

DigiLab2000 eXpressDSP™ products include:
• Symbol Timing Recovery and fractional frequency offset correction of OFDM symbols in a DVB-T receiver compliant with standard ETSI EN 300 744 v.1.2.1.
• OFDM Symbol Demodulation with 16 up to 2048 subcarriers, including digit reverse algorithm, at 5.25 MSymbols/sec and SQNR greater than 60 dB.
• Discrete Wavelet Transform for JPEG 2000 as specified by ISO/IEC FCD15444-1, JPEG 2000 IMAGE CODING SYSTEM, Annex F (Discrete wavelet transformation of tile components).

Dilithium Networks

http://www.dilithiumnetworks.com/
sales@dilithiumnetworks.com

Universal Access, from any device, anywhere

Dilithium Networks focuses on enabling multimedia communications by interconnecting diverse networks and endpoints. Their product portfolio includes multimedia protocol stacks, codecs, audio/video transcoders, and multimedia gateways.

Dilithium Networks' patent pending audio/video transcoding technology enables efficient, on-the-fly transcoding between various audio/video standards without complete decode and re-encode of media streams. This significantly increases channel density and reduces cost per channel of multimedia gateways and terminals.

Dilithium Networks' global customer base includes network OEMs, device manufacturers, and carriers. Current XDAIS-compliant products include the H.263 and MPEG4 codec while several audio and video transcoders will be compliant by the year end 2002.

DResearch Digital Media Systems

http://www.dresearch.de
contact@dresearch.de

DResearch Digital Media Systems GmbH is a young, innovative company focused on research and development. It was founded in 1994 and works in the fields of information and communication technologies. The company develops compact, high-performance systems and components for the capture, analysis, compression, storage, transmission, and decompression of image, video, and audio signals. DResearch Digital Media Systems GmbH is an authorized distributor for the company Momentum Data Systems on the German market, and offers you a wide range of Filter Design Software, Audio DSP Hardware as well as TriMedia products by TriMedia Technologies, Inc.

DSP Global

http://www.dspglobal.com
rd@dspglobal.com

DSP Global designs and manufactures prototyping daughter cards for DSK and EVM DSP development systems from TI and Spectrum Digital. These cards are called ProtoPlus and ProtoPlus Lite (see www.dspglobal.com) and are used by DSP developers to quickly implement single and multi-board prototype circuits that plug into DSK and EVM systems. The company also provides eXpressDSP™-compliant software (see www.dspglobal.com/tfilters.htm) that implements seven common filters used in voice-band telecommunication systems. DSP Global provides design and consulting services for TI DSP-based embedded systems; analog and digital data communications; Time Domain Reflectometry (TDR); FIR, IIR, and multi-rate filters; and TI cross-platform-compliant daughter cards.

DSP Techniques

http://www.dsptechniques.com
info@dsptechniques.com

DSP Techniques provides DSP algorithm libraries and consulting services in the areas of audio, communications, and telephony.

DSP Wizard

http://www.dspwizard.com
dspwizard@dspwizard.com

DSP Wizard specializes in implementing compute-intensive algorithms on TI TMS320™ DSP chips. Its own products include five of the most popular ITU-T vocoder algorithms for the TMS320C55x™ DSP generation. As evidence of its expertise, each product is at least 25 percent faster than all other competitive offerings. And every one is eXpressDSP™-compliant. It currently specializes in the TMS320C28x™ DSP, TMS320C54x™ DSP, TMS32055x DSP generations, and OMAP™ processors. DSP Wizard can also fully implement its customers' complete systems due to its long experience with BIOS, peripheral drivers, ISRs, and boot-loaders.

DSPecialists

http://www.DSPecialists.de
info@DSPecialists.de

As Germany's largest system house for digital signal processing, DSPecialists provides innovative solutions in the development of powerful DSP-based products, supporting its customers from the initial idea, through the preparation of prototypes, up to the manufacturing stage.

The deep DSP know-how, vast project experience, particularly in audio signal processing, and a transparent, strictly modular development concept helps DSPecialists to realize top-quality products with significantly shorter development cycles.

DSPecialists provides audio interfaces, algorithms for audio compression and decompression, transmission, equalization, acoustic noise and echo cancellation, speech recognition, and various audio effects.

easytools S.L.

http://www.easytools.es
easytools_com@easytools.es

EASYTOOLS S.L. is a company that offers highly-integrated and cost-effective DSP solutions to design engineers.

E.I Creboux

http://www.eicrebouw.fr/english/englishindex.html
crebouw@eicrebouw.fr

E.I CREBOUW is a small company near Paris. It is specialized in the vocoder and modem software. It has developed two eXpressDSP™ software algorithms: a fast DTMF and the proprietary vocoder MUVOC.

The Fast DTMF is fast in terms of MIPS and efficient in terms of low signal-to-noise ratio. MUVOC is done for all applications: noise reduction, variable low bit rate for the voice and the music, voice effects, playback at variable speed.

E.I CREBOUW offers his services as subcontractor in the domain of the vocoder and modem for all TI DSP platforms.

Elanix

http://www.elanix.com
elanix@elanix.com

SystemView by Elanix is the simulation tool used by leading electronics manufacturers to design, develop, and test communications, DSP, signal processing, and RF/analog systems. SystemView integrates bit-true DSP including TI eXpressDSP™-compliant co-simulation, distortion true RF, extensive communication models, full-range filter design, and now S-parameters. All in one tool!

Consider applications in wireless and wired communication, optics, 3G FDD and TDD, CDMA, DVB, Bluetooth, 802.11a, 802.11b, UWB, DSP, C-code generation, RF/analog, S-parameters, and much more. Theoretical models are easily verified, test-bench models match simulation results including bit-true verification.

Electronic Design Associates

http://www.useda.com
info@useda.com

EDA is a hardware and software consulting house with over 10 years of TI DSP experience, over 10 designs in production, and over 100K units of TI DSP audio products sold. In addition to turnkey design, EDA specializes in code optimization and fixed point algorithm development and implementation. Services focus on DSP application areas of audio, consumer, telecom, VoIP, and telephony. EDA can also provide FCC and other regulatory agency testing and approvals, and we work with several very experienced industrial and plastics design houses and can support enclosure designs for telephony and other consumer products.

Emuzed

http://www.emuzed.com
sales@emuzed.com

Emuzed is a multimedia technology company offering highly optimized, XDAIS-compliant embedded software for the TMS320C64x™ DSP, TMS320C55x™ DSP, OMAP™ and DSC platforms. Primary markets are CE, mobile, and security.

Emuzed's encoding and decoding engines include MPEG-4, H.263, H.263+, JPEG, JPEG2000, MJPEG, MP3, AAC, WB-AMS TMS320C6000™ DSPs. Our algorithms are in the areas of speech coders (G.7xx, GSM-AMR, G.168), fax modem (ITU-T V.xx, T.30 Protocol, T.38 Protocol), Data Modem (ITU-T V.xx,) and telephony algorithms (DTMF, Caller-ID, MF R1/R2).

Encore Software Limited

http://www.ncoretech.com
prithvi@ncoretech.com

Encore Software Limited is based in Bangalore with a 100% subsidiary in the USA. Encore develops DSP based modems and speech coder algorithms based on the ITU standards. Encore also provides Software development services in the Embedded Systems arena. Encore's products are targeted at Semiconductor, electronic and telecommunication equipment manufacturers.

Enounce

http://www.enounce.com/
djhejna@enounce.com

Enounce is a recognized industry leader in digital signal processing-based software solutions for Time-Scale Modification (Variable Speed Playback). Enounce licenses its patented technology and software on a variety of TI DSP platforms for applications needing variable speed playback that maintain pitch, speaker identity, and intelligibility in the presence of background noise or music.

eSecurium SA

http://www.esecurium.com
olc@esecurium.com

eSecurium SA is an IT security company. It delivers hardware and software solutions that secure both payment transactions and data transmissions for corporate clients. In particular, eSecurium offers a range of products designed to secure payment transactions for the interactive TV market, online shopping, T-commerce, online betting and gambling, games, etc. – that generate substantial value to cable and satellite TV operators in their deployment of interactive services.

Ethentica by SECURITY FIRST

http://www.ethentica.com
sales@ethentica.com

Ethentica by Security First Corp. has developed a series of electronic Ethentication™ services to meet the need for trusted Internet commerce and communications – linking users to their digital identities in a convenient, secure, and context-sensitive manner. They will be developing a Biometric Security Solutions Reference Design, based on the TMS320C5509 DSP, featuring an xDIAS fingerprint recognition algorithm, reference framework, management software, running under BIOS.

Fonix Corporation

http://www.fonix.com
sales@fonix.com

Fonix Corporation is a provider of human-user interface IP for wireless and mobile devices, Internet, telephony systems, and vehicle telematics. Products include Text-To-Speech, Automatic Speech Recognition, and Handwriting Recognition software.

Fonix partners and customers worldwide use Fonix voice technologies and natural user interface solutions for integration into consumer products, mobile and wireless devices, PDAs, automotive systems, unified messaging services, email readers, HTML web readers, English education software, auto attendants, stock quote systems, web-based college education courses, voice portals, IVR systems, and other applications. Leading chip manufacturers, independent software and hardware vendors, and Internet content and service providers incorporate these solutions to provide their customers with the most effective, natural user experience available.

Fraunhofer IIS

http://www.iis.fhg.de/amm/products/audio_dsp/ti.html
gey@iis.fhg.de

Fraunhofer develops for their customers' microelectronic circuits, electronic equipment and systems up to turn-key industrial installations. Areas of application are information and communication technology, x-ray technology, electronic imaging, image processing, and medical technology. Main fields of research include audio and video coding, radio frequency and microwave circuits, integrated digital systems, automatic image recognition, x-ray technology, and high-speed camera systems.

GAO Research Inc.

http://www.gaoresearch.com
info@gaoresearch.com

With nearly a decade of experience, GAO offers a unique and comprehensive suite of high-quality, field-proven communication products, which are all developed in-house at its office in Toronto. GAO Research Inc. provides embedded communications software for voice-band modems, broadband DSL modems, fax, fax relay, fax over IP, speech, telephony, voice over IP, and voice over DSL used Internet appliances, web phones, set-top boxes, PDAs, ebooks, feature phones, digital cameras, software modems on PCs, wireless communications devices, modem pools, metering, MP3 players, security monitoring, and POS terminals, gateways, mechanical devices, and much more.

GDA Technologies, Inc.

http://www.gdatech.com
info@gdatech.com

GDA Technologies' electronic design services include: hardware systems, reference designs, embedded software, algorithms, and ASIC/FPGA design.

Global IP Sound

http://www.globalipsound.com
info@globalipsound.com

Global IP Sound's SoundWare™ technology is specifically designed for real-time voice communication over IP networks. GIPS SoundWare provides a robust QoS voice solution to any device, anywhere, anytime, at carrier-class quality. These edge-based solutions allow any VoIP implementation to withstand up to 30% packet loss at PSTN quality or better. GIPS' world-renowned speech processing and IP telephony experts deliver these solutions to Nortel Networks, Pingtel, GateLinx, and many other VoIP providers. GIPS SoundWare is certified for the TI eXpressDSP™ and is currently being deployed on the eXpressDSP™ platform in Nortel Network's i2004 IP phone. Global IP Sound has offices in Stockholm, San Francisco, and Boston.

Heinrich-Hertz-Institut für Nachrichtentechnik Berlin GmbH

http://www.hhi.de
talmi@hhi.de

Heinrich-Hertz-Institut für Nachrichtentechnik Berlin GmbH specializes in research and development in the areas of telecommunications that include but are not limited to photonic networks, mobile broadband systems, and electronic imaging technology for multimedia. The aim of the research and development activities at the Heinrich-Hertz-Institut (HHI) is to expand the principles of information technology and to develop new applications in partnership with industry leaders.

Hellosoft

http://www.hellosoft.com
info@hellosoft.com

HelloSoft is a leading provider of high-performance embedded communications solutions for multifunction devices. HelloSoft licenses both Physical Layer IP and Networking Protocols IP for 2.5G and 3G Wireless, 802.11x Wireless LAN, Voice-Over-Packet, Digital Subscriber Line, and Bluetooth. HelloVoice™ and HelloWireless™ solutions available on Texas Instruments DSPs (TMS320C54x™ DSP, TMS320C55x™ DSP, TMS320C6000™ DSP, and OMAP™ processor) include the G.729A vocoder, the AMR speech codec, and the G.168 Line Echo Canceller. Solutions can be provided as components or as an integrated solution including DSP software, networking software and RTOS on a reference platform. The HelloSoft team follows a rigorous design and test methodology to ensure quality, and has extensive experience in successful field deployments.

Hunt Engineering

http://www.hunt-dsp.com
sales@hunteng.co.uk

Hunt Engineering uses compliant plug-ins to extend the capabilities of Code Composer Studio™ when it is being used with the HERON product range.

HERON modular products allow a customer to assemble a system that has the features they want choosing from TMS320C6000™ DSPs, FPGA, and I/O. The plug-ins allow them to configure and develop the code for those systems simply and quickly. They form part of the extensive support package provided to accelerate the development of your system.

Hyperception

http://www.hyperception.com
sales@hyperception.com

Hyperception, Inc., founded in 1984, provides advanced DSP development software combining the power and cost effectiveness of the PC with programmable DSPs. Hyperception's software tools, including the Component Wizard for eXpressDSP™ and VAB, address the areas of component-based DSP design and analysis, virtual instrumentation, and simulation/CASE, dramatically lowering the typical DSP design learning curve, and offering sophisticated software methodologies that provide drastic improvements in the way many engineering projects are developed. Applications range from low-level DSP systems design and implementation to specific projects including real-time communications, control systems, imaging applications, and more.

IdenCom AG

http://www.idencom.com/
talmi@idencom.com

IDENCOM develops stand alone fingerprint recognition solutions with applications in the security sector and other industries. Their BioKey® 2002 is a PC-independent stand-alone fingerprint identification module for biometric applications, and it is full functional independent of computer or network. Beside the BioKey® product line, IDENCOM also offers customized solutions for its customers which we support from the planning phase to the application specific integration.

IdentAlink GmbH

http://www.identalink.com
ehilgers@biometrics.ws

IdentAlink's principal business is the development and sale of enterprise security management software featuring the use of biometric recognition technology and PKI to provide secure and reliable verification of personal identity in a variety of applications. The goal is to eliminate the use of passwords and personal identification numbers, both of which are susceptible to misuse and provide authorised users with unnecessary inconvenience. IdentAlink provides an electronic communication system that integrates Public Key Infrastructure with multi-layered Biometrics, making the transmission of digitally signed encrypted communication an easy thing to do.

ILLICO

http://www.illico.com/tigate.htm
sbrad@ix.netcom.com

Since 1990 ILLICO has been a leading supplier of DSP software components for the telecom industry. These components have allowed their clients to take advantage of the low system cost and flexibility afforded by multi-channel DSP designs. The wide selection of software set-up and run-time options has permitted ease of installation of ILLICO products on the hardware platforms of over 25 client companies.

ILLICO's most popular products are DSP software modules for multi-channel FAX and data modems. ILLICO also offers complete FAX/Data Relay solutions using both T.38 and enhanced proprietary protocols.

Image Power

http://www.imagepower.com
support@imagepower.com

Image Power develops and markets powerful image compression technologies for still and multimedia images, for use in a range of applications from consumer desktop use to implementation in embedded controllers systems, ASICs (Application Specific Integrated Circuits) and FPGAs (Field Programmable Gate Arrays). Image compression technologies are key to the space-saving archiving of high-quality images, and to the rapid transmission of images across wired and wireless networks. Image Power expects to be a pivotal player as the Internet and associated wired and wireless devices become more and more dependent on the rapid transmission, storing and retrieval of high-quality images. The company's core technology has been under development and refinement since early 1996.

Imagine Technology

http://www.imaginetechnology.net
sales@imaginetechnology.net

Imagine Technology provides complete DSP solutions for embedded multimedia and telephony applications, focusing on acoustic signal processing and emphasizing excellent audio quality. Imagine is involved in a variety of multimedia applications for video, internet audio, and portable music devices. The company also provides full-duplex speaker phone applications for conference phones, hands-free, and VoIP systems. As an official Third-Party Vendor of Texas Instruments, Image Technology offers tested and approved algorithms for a wide range of DSP-based processors, which are eXpressDSP™ compliant. Complete DSP solutions include audio, speakerphone design, modulation/demodulation, and encryption.

Indesign

http://www.indesign-llc.com/
marketing@indesign-llc.com

Indesign, an electronic product design services firm, offers expertise in electrical/circuit design, software/firmware design, mechanical design, human factors design, and testing/validation with a strong emphasis on products utilizing embedded DSPs and microprocessors.

The company developed an Acoustic Echo Canceller (AEC) algorithm, which we are making available for product use in devices containing hands free/speakerphone voice communication features. Our AEC algorithm is designed to reduce acoustic echo that arises in communication products where a microphone and speaker are located relatively close together in an open field.

Ingenient Technologies

http://www.ingenient.com
info@ingenient.com

Ingenient provides high-performance, software-programmable embedded solutions for the creation, delivery, and presentation of multimedia content. Ingenient leverages its expertise in multimedia and embedded software to provide unique solutions for Internet streaming and storage environments. The Ingenient software solutions include encoders, decoders, transraters, transcoders, and multimedia-aware networking products. Additionally, Ingenient provides hardware and software reference systems, multimedia software frameworks, and system integration services to speed its customer time-to-market. Ingenient solutions are available for the TI TMS320C62x™, TMS320C64x™, TMS320C54x™, and the TMS320DSC DSP generations to suit a wide range of applications.

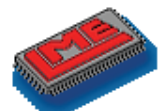**Ittiam Systems**

http://www.ittiam.com
mkt@ittiam.com

Ittiam Systems is singularly focused on signal-processing systems for multimedia and communications. The company specializes in applications that require systems integrated across these domains. The targeted dual-domain competency offers the customer the distinct advantage of complete solutions for their applications and the ability to create new applications by the synthesis of multiple competencies. Ittiam's products range from algorithm, software to reference boards and soft cores. This includes both off-the-shelf and customized solutions. All the products are targeted to be eXpressDSP™-compliant including G.7xx family of speech codecs and MPEG4 Simple Profile video codec.

Ittiam Systems reaches out globally through its offices in the U.S.A, United Kingdom and a network of representatives across the U.S., Europe, Japan, and the rest of Asia.

LME – CEFET/PR University

http://www.lme.cpdtt.cefetpr.br
lme@cefetpr.br

LME (Microelectronics Lab) is a Design, Consulting, and Training Center for Applied Microelectronics applications.

Their products include TMS320C54x™ DSP-based G.726, DTMF and TMS320C24x™ DSP-based PID Controller algorithms. LME is also available for the development of custom or standard algorithms, in Telecom or any other areas.

Lucent Technologies Inc.

http://www.lucent.com
mstimmel@lucent.com

Lucent Technologies is a provider of best-in-class software technologies from Bell Labs R&D.

Mango DSP

http://www.mangodsp.com
info@mangodsp.com

Mango DSP is a leader in development and manufacturing of unique, comprehensive, and innovative solutions for the Digital Signal Processing (DSP) based market. Mango DSP boasts a brilliant team of system experts, providing an extensive range of the most advanced and high-powered integrated DSP solutions. Mango DSP has developed a business strategy that positions the company as a "one-stop shop" solution provider of hardware and software capabilities to original equipment manufacturer (OEM) through building strong brand recognition, strong relationships with OEMs and DSP tool developers, and maintaining a focus on providing superior technology solutions.

Mango DSP hardware, software, turn-key products and systems solutions are geared to the video, medical imaging, array processing, image and voice\audio processing, data acquisition, communications, military, and many other emerging DSP-based markets.

In addition to video imaging software, Mango DSP provides hardware systems for the TMS320C6000™ DSP, and Mango Math Link EDS Software development environment to help customers get to market faster.

The MathWorks, Inc.

http://www.mathworks.com/
info@mathworks.com

The MathWorks develops, markets, and supports MATLAB®, Simulink®, and add-on tools for system-level design and simulations for DSP and communications applications.

Mecoso Technology Inc.

http://www.mecoso.com
info@mecoso.com

Mecoso Technology Inc. is a privately held company based in western Canada. We design algorithms, implement them on embedded platforms, and do consulting works related to image and video processing.

MESi

http://www.mesi.net/
infomaster@mesi.net

MESi offers software solutions in a unique "component" form that lets you add telecom modem and signaling capability to virtually any embedded system. You can choose Object Code for lowest cost, Assembly Source for maximum flexibility, and/or C Source for advanced users and developers. The C Source was developed specifically to facilitate efficient porting to native Assembly code on 16-bit processor architectures. MESi Assembly and Object Codes are manually ported from the C Source for maximum performance and minimum memory usage on leading edge DSPs and RISC processors.

MIKET DSP Solutions Co.

mikets@telus.net

MIKET DSP Solutions develops high-performance, high-quality telecom components for TMS320C54x™ and TMS320C55x™ DSP generations, provides general DSP and system design consulting, and accepts customer-specific projects.

Motorola Computer Group

http://www.motorola.com

Motorola Computer Group is a leading supplier of DSP-based solutions to the telecommunications industry and provides digital signal processor (DSP) subsystems to more than one-half of the world's top 40 companies.

The company's leading-edge DSP resource boards are designed to deliver the highest performance using the most advanced DSPs on cPCI, PCI, and VME platforms. Combined with advanced system-level software, solutions can be deployed in a variety of high-density, carrier-grade installations within the telecommunications infrastructure. Application areas include wireline and wireless, from VoIP to 3G.

Multimedia Technology Institute

http://www.mtionline.it/
info@mtionline.it

Multimedia Technologies Institute – MTI S.r.l. is a hi-tech laboratory operating in the field of interactive multimedia technology.
Mission:
- The study, design and DSP implementation of advanced digital signal processing algorithms and systems
- Advisory services for: applied research, development of dedicated software, implementation on DSPs, and signal analysis.
- Research into industrial applications for multimedia systems.
Services:
- Applied research
- Algorithms development
- Software components development
- Software design and implementation
- DSP implementation
- CTI development and telephonic traffic analysis

NCT Group

http://www.nctclearspeech.com/
ray@nctgroupinc.com

NCT Group, Inc. (OTCBB: NCTI) is a publicly traded, high-tech U.S. company founded in 1986. The company's Algorithm Group has specialized in developing the ClearSpeech suite of signal-processing algorithms for enhancing voice communications by removal of unwanted noise. The ClearSpeech suite includes algorithms for removing acoustic and line echo, stationary noise, pops, pre-speech noise, noise between speech, and noise for which a reference signal is available. NCT's stationary noise reduction algorithm, the Adaptive Speech Filter, is available with eXpressDSP™-compliant format for the C67x™ and C54x™ DSP generations, and the Referenced Noise Filter and Acoustic Echo Cancellation Algorithms for the TMS320C67x™ DSP generation.

Neurodynamics Limited

http://www.neurodynamics.com
biometrics@neurodynamics.com

In 1991, Cambridge University researchers founded Neurodynamics. Today, the company leads in the development of advanced recognition systems, achieving this by taking research from the lab and applying it to previously unsolved business problems in the commercial world.

Neurodynamics Biometrics Division has been working in the finger-print recognition arena since 1993, when it developed the world's first neural network-based automated fingerprint identification system for South Yorkshire Police. Since then, the system has been supplied to a number of other national police forces. The same algorithms are now available as Deixis, a software development kit for both PC and embed-ded platforms.

Neuvoice Ltd

http://www.neuvoice.com
info@neuvoice.com

NeuVoice is a software company specializing in supplying light, robust, and accurate speech recognition technology within the device. This is an innovative technology inspired by the biological models of hearing and speech production. As a consequence, the resulting algorithms code to an extremely small memory and processing footprint. Providing over 98% accuracy in ambient noise conditions and the ability to per-form in high noise environments, this is one of the most accurate voice recognition systems available.

NTRU Cryptosystems, Inc.

http://www.ntru.com
info@ntru.com

NTRU delivers unparalleled performance on mobile devices. Wireless applications require strong security. Even more importantly, they require invisible security – anything less will negatively impact the user experience and severely limit adoption. NTRU security can be proces-sed simultaneously with the application (multi-tasking) – enabling oper-ations to run up to 125 times faster than competitors. Applications pre-viously impossible now become practical. The result is a compelling user experience that promotes habitual use and accelerates adoption. Moreover, the speed efficiency of NTRU security reduces the drain on handset memory, battery power, and processing bandwidth.

Octiv, Inc.

http://www.octiv.com
johnson@octiv.com

Octiv offers a powerful professional audio toolbox to the DSP market. Multi-band dynamics processing optimized for music/entertainment or voice/telephony applications improves the impact and clarity of digital audio. Applications for Octiv solutions range from consumer electron-ics to packet-switched telephony equipment. The Berkeley, California-based company was founded in 1999 by a group of experienced audio industry professionals.

On2 Technologies

http://www.on2.com
sales@on2.com

On2 Technologies (AMEX: ONT) has been a leader in the design of soft-ware-based compression algorithms and related products for over 10 years. With On2's VP4 Codec, broadcast quality video (DVD) can now be compressed down to one megabit per second (0.12 MBytes) or less, a 50-60% data rate savings compared to MPEG-based solutions.

For clients looking for the ultimate video compression solution, On2 offers in-house encoding and remastering services that deliver digi-tized video of similar quality to the video produced by DVD encoding or post-production color correction facilities. For those professionals who prefer to compress their own video files, On2's Professional Encoder can provide the desired flexibility and convenience.

Pentek

http://www.pentek.com/ccs
sales@pentek.com

Pentek offers powerful VME, VIM (Velocity Interface Mezzanine), PMC, and VXI boards for data acquisition, software radio and digital signal processing featuring the TMS320C6000™ DSP platform. Pentek's data acquisition line is extensive and includes A/Ds, D/As, digital receivers and upconverters, digital I/O, and much more. In addition to many high-performance mezzanine solutions with PMC and VIM, Pentek equips products with high-speed interfaces including RACE++, FPDP, and Fiber Channel and offers strong software development tools and support.

Philips Speech Processing

http://www.speech.philips.com
voicecontrol.usa@philips.com

Philips Speech Processing is responsible for all the speech-related activities within Philips. Philips has been involved in speech activities since 1954 and is recognized as a key player in the speech recognition field worldwide. It provides advanced ASR (Automatic Speech Recognition) embedded software solutions to the mobile wireless, automotive, and consumer electronics industries.

The Voice Control division develops solutions to voice-enable embedded devices such as cell phones, PDAs, set-top boxes, hands-free kits, MP3 players, and automotive cockpit controls. Philip's solu-tions are designed to fit on small memory and CPU footprints, while still providing a high rate of speech recognition accuracy.

Pivot DSP

http://www.pivot-dsp.com
mosstern@aol.com

Pivot Signal Processing Ltd. develops, sup-ports, and markets TMS320C6000™ DSP-based, optimized eXpressDSP™-compliant software modules for the telecom and the IT markets.

The company has a proven track record for consistently delivering high-quality, low-cost products and solutions on time to its customers.

Planning Systems

http://www.plansys.com/
paverna@plansys.com

PSI's VoiceGuard™ is the premier multi-microphone adaptive beam-forming technology to enable superior sound quality and accurate input for ASR in real world/noisy environments. Compatible with any small form factor voice-based device, up to 24 dB of SNR improvement is possible on both C54x™ and C55x™ DSP implementations with < 5 MIPS and 5.5 kwords footprint, using inexpensive microphone elements.

Planning Systems Incorporated has been a leader in acoustics, signal processing, and sensor technology since 1972. The company provides end-to-end capabilities from concept to prototype field testing. With 345 employees in 20 offices nationwide, PSI serves government and private clients around the world.

Precise Software Technologies, Inc.

http://www.psti.com
info@psti.com

Precise Software Technologies develops and sells royalty-free embedded real-time operating systems, embedded data communications, and network protocols, as well as software development tools.

PRODYS

http://www.prodys.net
sales@prodys.net

Prodys is a supplier of digital video and audio solutions for audiovisual applications.

Prodys provides video and audio technology solutions that allow third parties to create their own applications. These offerings include high-performance video and audio compression software, hardware and software reference designs, and higher level integration services to allow fast time-to-market products for its customers. Prodys solutions are available for the TI TMS320C62x™, TMS320C64x™, and TMS320C67x™ DSP generations that cover a wide range of applications and are compatible with the TMS320™ DSP Algorithm Standard.

RadiSys Corporation

http://www.radisys.com
info@radisys.com

RadiSys (Nasdaq: RSYS) designs and manufactures building blocks, platforms, and application subsystems for next-generation communications equipment. As the leading independent provider to OEMs, RadiSys delivers a time-to-market advantage in a tight "virtual division" relationship with its customers. The span of products ranges from board-level components such as processors, network interfaces, and packet-processing engines, to communications middleware software such as signaling and networking protocol stacks, to platforms based on PCI, CompactPCI, and switch-fabrics, to services such as NEBS certification and software and microcode professional services, all the way up to private-label gateway systems.

Rational Software Corporation

http://www.rational.com
nodwyer@rational.com

Rational Test RealTime provides automated testing and runtime observation capabilities for embedded software running in a simulator, emulator, or directly on the intended, embedded target platform.

RistanCASE GmbH (Ltd.)

http://www.RistanCASE.ch/da-c
info@RistanCASE.ch

Founded in 1994, located in Wallisellen-Zurich, Switzerland. RistanCASE GmbH develops and markets software development tools for programming embedded applications using microcontrollers.

RoadComm

http://www.road-com.com/
Sales@road-com.com

RoadComm, Inc. is among the first companies to offer total solution for advanced telematics, technology, product and modules. Through years of expertise and research in the automotive industry, RoadComm has built flexible and reliable software, hardware (such as GPS, vehicle remote diagnostic, voice, and wireless technologies), ASP, and innovative tools.

Speech Recognition Module provides speaker dependent/independent, speaker verification, speaker adaptation, and continuous recognition capability.

Text-to-Speech Module is the world's only pure DSP-based TTS engine which provides near human voice quality. The quality of speech has reached nearly the peak technology can do. RoadComm offers parameters for you to tune the voice to your satisfaction, thus you can create different men, women, and children's voices.

Romsey DSP Ltd

http://www.romseydsp.com
info@romseydsp.cosm

Romsey DSP is a small UK company specializing in speech and audio codecs, DSP algorithm development, and TI TMS320C55x™ DSP programming.

S and K Electronics

http://www.sk-tech.com
info@sk-tech.com

S&K Electronics Automation and Robotics Division specializes in system-level solutions for advanced automation and control. Products range from board-level electronics to intelligent software packages to meet our customers' every need. S&K provides engineering services through our quality technical staff to help our customers meet their project goals on time and within budget.

S&K headquarters is located in Ronan, Montana. Originally established as a manufacturing concern in 1984, S&K now has over 90 employees in four locations across the country engaging in research, product development, electronics, information systems, manufacturing, and healthcare-related businesses.

Sasken Communication Technologies Limited

http://www.sasken.com
sales@sasken.com

Sasken is a leading provider of telecommunication software solutions and services to terminal equipment manufacturers, network equipment vendors, semiconductor companies, and network operators around the world. Certified at SEI CMM Level 5, Sasken delivers high-quality end-to-end solutions that enable richer content delivery on next generation networks.

Sasken is a world leader in terminal equipment software such as wireless protocol stacks, multimedia codecs, applications, and middleware. Sasken offers sustenance and development services in wireless and enterprise voice markets, test and measurement, optical networks, and mobile internet to network equipment manufacturers.

Since its inception in 1989, Sasken has grown to be 900 strong and has its headquarters in Bangalore, India with offices in Japan, Europe, China, Canada, and the USA.

SIAL Ltd.

http://www.dsp.sut.ru/sial/index.html
info@dsp-sut.spb.ru

SIAL Ltd. researches and develops high technology products in various digital signal processing areas including:
- Non-linear digital signal processing
- Digital filters
- Computer telephony and its applications
- Informational technologies
- Speech technologies
- Audio and video technologies
- DSP programming
- Training

Signals and Software Ltd

http://www.signalsandsoftware.com
enquiries@signalsandsoftware.com

SIGNALS+SOFTWARE Ltd (S+S), the world-leading provider of multi-platform DSP software solutions for digital communications, provides an extensive range of communications algorithms on both Texas Instruments TMS320C6000™ and TMS320C5000™ platforms of DSPs.

S+S has been a strong supporter of eXpressDSP™ since its inception and now has a large catalog of products, the majority of which are already eXpressDSP compliant. All algorithms will be made eXpressDSP compliant on request should they not be already.

S+S provides, besides an extensive range of algorithms, a full service of customization, design, and support for those customers that require something a little different.

SignalWorks

http://www.signalworks.com
sales@signalworks.com

SignalWorks is a software development company that licenses its proprietary full-duplex speakerphone technology to OEMs that utilize TI's TMS320C5000™ DSP hardware platforms. SignalWork's technology eliminates echo and reduces noise, allowing high-quality, full-duplex voice conversations to take place over teleconferencing speakerphones, VoIP telephones, wireless handsets, and hands-free car speakerphone systems without clipping or annoying echoes. Licensees include Fortune 500 and large corporations in the USA, Europe, Asia, and Japan. SignalWorks was founded in 1994 and is based in Mountain View, CA.

Signion Systems Ltd.

http://www.signion.com
info@signion.com

Signion Systems Limited's main strength is their expertise in DSP hardware, algorithms, and optimized software development. They focus in communications, defense electronics, video, audio, speech compression and processing, and power monitoring and control. Signion provides manufacturing of DSP cards and licensing of DSP-based products such as electronic meters/FEC cards, SATCOM modems, AEC, multimedia systems, DSP algorithms, and software etc.

SigNumerix Inc.

http://www.signumerix.com
info@signumerix.com

SigNumerix, Inc. offers an array of products including telephony DSP software and standards-based speech compression algorithms. These products provide advantages to our customers in terms of reliability, time-to-market, guaranteed standards compliance, and specified resource utilization. SigNumerix also provides consulting services for DSP software design and development across the entire range of DSP applications. These include audio and telephony algorithms, RF and telephone modems, image processing, test and measurement equipment signal processing, and hundreds of other applications.

Snapshield

http://www.snapshield.com/
sales@snapshield.com

Snapshield provides a security enabler platform along with an offering of cryptographic libraries for OEMs. With its extensive experience in telephony security, Snapshield contributes security software applications, implemented today in legacy (wireline and wireless) services, along with a rich cryptographic library that includes all the algorithms required by the IPSec standard. Snapshield offers both low footprint and exceptional efficiency that minimizes impact on battery life – so essential to wireless communications devices. Snapshield holds a complete list of compliant Third-Party Encryption Algorithms. A seasoned team of veterans of the Israel Defense Forces Intelligence Corps established Snapshield in 1996.

Softier

http://www.softier.com
info-softier@softier.com

Softier's team brings 17 years experience in building telecom-related DSP subsystems, Windows™/Linux hardware/software integration, audio/video algorithms and networking. The company recently launched VIPEX, a multi channel PCI Video DSP processor, aimed at video applications and algorithm developers. Softier also offers XDAIS-compliant Motion-JPEG and WaveGSM implementations for the TMS320C64x™ DSP generation. Based in the U.S. and Israel, Softier offers a wide variety of technical and engineering services at competitive prices.

Sound ID

http://www.soundid.com
info@soundid.com

Sound ID™ was founded with the mission to enhance the personal appreciation of sound across a spectrum of listening experiences. Sound ID accomplishes this through the development of proprietary Personalized Digital Sound technology, which is based on an advanced understanding of sound and the functioning of the human ear. By partnering with manufacturers of digital audio devices such as digital mobile phones, internet audio players, and headsets, Sound ID will bring this technology to consumers. Consumers can then use our technology to personalize and adapt their listening experiences to their environment, as in the example of listening in a noisy background, or to their own individual hearing.

Spatializer Audio Laboratories, Inc.

http://www.spatializer.com/
sales@spatializer.com

Spatializer is a leading provider of audio enhancement technologies for consumer electronics manufacturers. Spatializer has developed algorithms that are already being integrated into many new products throughout the industry such as DVD players, MP3 players, and televisions. A few of these eXpressDSP™-compliant algorithms for the TI C54x™ and C55x™ DSP generations of processors are Spatializer Vi.B.E. (virtual bass enhancement), Spatializer PCE (Phase Corrected Equalization), and 3D Stereo (Speaker Virtualization). The Spatializer logo is found on millions of consumer electronic products and helps manufacturers to add extra value to products in competitive markets.

Spectral Design

http://www.spectral-design.com
a.skaebe@spectral-design.com

Spectral Design is a consultant for digital signal processing, digital filter design, measurement, digital audio, and algorithm development.

Spectrum Signal Processing

http://www.spectrumsignal.com
Wireless@spectrumsignal.com

Spectrum designs and supplies leading-edge, high-density signal processing systems for wireless and wireline communications infrastructure markets. Spectrum's three target markets are Commercial Wireless, Government Wireless, and Voice-over-Packet. Target applications for Spectrum's signal-processing systems include satellite gateways and hubs, cellular base stations, radio surveillance, signal detection, smart antennae, broadband access gateways, echo cancellation, and media gateways.

Speech Technology Center

http://www.speechpro.com
info@speechpro.com

Speech Technology Center (STC) is a leading developer of the digital speech processing technologies such as noise cancellation, speaker identification/verification, and voice recognition.

STC offers for licensing eXpressDSP™-compliant solutions (all for TMS320C54x™ DSP generation):
- Denoiser Clear Voice – an algorithm for real-time noise cancellation and speech enhancement customized for. Denoiser is an effective means for improvement of speech quality in the telecommunication channels – it helps to gain more customer satisfaction at low cost.
- VoiceCom – language independent recognition of voice commands – an easy way to enable the devices with natural language interface.

SPIRIT Corp.

http://www.spiritcorp.com
sales@spiritcorp.com

SPIRIT is a prominent supplier of high-quality DSP (Digital Signal Processing) software products, including VoIP, FoIP, sophisticated speech processing, speaker ID, telephony, GPS, audio and video compression, face ID, and more. With major R&D offices located in Russia, SPIRIT also provides professional services in custom DSP software development and related areas.

SPIRIT's main area of expertise includes Digital Signal Processing (DSP), client side telephony, speech processing, FoIP and VoIP, audio and video processing, GPS & GLONASS design, Fax and Data modems, ASIC&FPGA design and more.

SRS Labs, Inc.

http://www.srslabs.com/
sales@srslabs.com

SRS Labs, Inc. (NASDAQ:SRSL) develops and licenses advanced audio and voice software technologies for high-growth consumer product markets including A/V receivers, DVD players, portable audio players, mobile phones, PDAs, car audio systems, hands-free telematics systems, and personal computers. SRS licensees consist of over 200 of the world's leading manufacturers, including Sony, Sharp, Thomson, Philips, Kenwood, Mitsubishi, Hitachi, Microsoft, Olympus, JVC, and Pioneer. SRS offers manufacturers best-of-class audio and voice software solutions that not only enhance the product's performance, but also deliver consumer branding and marketing advantages. SRS subsidiary, SRSWOWcast Technologies provides SRS technology solutions for the Internet and broadcast markets.

Starbase Corporation

http://www.starbase.com/
sales@starbase.com

Starbase Corporation provides enterprise application management solutions that address the full software development life cycle. Starbase leverages its software solutions and key partnerships with established industry leaders to deliver an end-to-end enterprise solution for our customers. The Starbase approach is to combine our own leading technology with best-fit partner solutions and professional implementation services to enable our customers to speed the application development process and achieve the results they expect. These services include technology to address the definition, development, and management of software applications, resulting in improved bottom-line performance. Starbase's flagship products, StarTeam, a configuration and change management solution and CaliberRM, a web-based requirements management solution enable organizations to implement an enterprise level, collaborative requirements-driven development process that delivers full traceability and accountability across the entire development lifecycle.

Stocker Ing. Buero

friedrich.h.stocker@t-online.de

Stocker Ing. Buero features development of DSP algorithms and software DSP system design.

Streambox Inc.

http://www.streambox.com
sales@streambox.com

Streambox Inc. is a provider of advanced compression technology and innovative software solutions for interactive video-on-demand over IP networks. Streambox has developed a suite of integrated technologies that incorporate codecs, client and server software for the delivery of digital high-quality (VHS to DVD) video to TVs and PCs. With offices in the U.S.A., Russia, Korea, and Japan, Streambox markets its products and services worldwide to cable and DSL operators, content providers, system integrators, and set-top box manufacturers.

SURF Communication Solutions Ltd.

http://www.surf-com.com
ssegev@surf-com.com

Surf Communication Solutions Ltd. (Surf) is a leading developer and supplier of software-based access solutions for OEM systems, providing data modem, fax, and voice services over packet telephony networks. Addressing the growing demand for high-density, low-cost modem, fax, and voice solutions, Surf's products provide full convergence of all types of transmissions. Surf's advanced software-based access solutions facilitate short time-to-market and enhance the customer's competitive edge. The company's customers include premier original equipment manufacturers in the telecommunications, telephony, and consumer electronics industry.

    Surf's solutions provide the high modem access density. The company's open system software enables easy integration of universal port services into multiple channel environments. Surf's solution of data, fax, and voice convergence is fully customizable, enabling activation of any combination of these transmissions according to customers' needs.

Syspac Ltda

http://www.syspac.com.br
vendas@syspac.com.br

Syspac Ltda is a design house with expertise in embedded DSP, real-time and multi-tasking hardware and software.

Tata Elxsi

http://www.tataelxsi.com/
info@tataelxsi.co.in

Tata Elxsi helps product manufacturers deploy technologies across layers of silicon, systems, and software in products. Tata Elxsi services address product engineering needs across hardware (ASIC/SoC/Board), firmware, DSP, embedded software, and host-based application software for products used in automotive, consumer electronics, media, network telecom, semicon, storage, and scientific applications markets.

    Tata Elxsi provides comprehensive services for DSP-based custom application development or deployment in products. Tata Elxsi is an eXpressDSP™-compliant Third-Party Program member of Texas Instruments. The company offers eXpressDSP™-compliant products and services to customers in the areas of graphics, multimedia, communications, and complex controls; and optimizing them for execution over various TI platforms.

Technosoft

http://www.technosoft.ch
contact@technosoft.ch

Technosoft has a strong know-how in digital motion control, complemented by industrial control DSP boards and corresponding development tools. As an active partner in the Texas Instruments Third-Party Support Network, Technosoft offers a range of development tools which accelerate the evaluation of the TMS320C24x™ DSP generation and the design of applications.

    Motion-specific software features, such as motion-capture function and graphical software tools allow a rapid familiarization with the particularities of control algorithms applied to different motor technologies and reduce design time.

Tecteon

http://www.tecteon.com/
info@tecteon.com

Tecteon develops leading edge software solutions to improve the quality of sound in Telecommunications. Utilizing state of the art technology, Tecteon is bringing innovations that will create value and return profit to its shareholders. The Company addresses a number of common problems in the telecom industry, as well as other industries. It aims to eliminate echoes heard on telephone lines as well as the suppression of noises and recognition of tones.

Telisma

http://www.telisma.com
contact@telisma.com

Telisma designs, develops, and sells speech-recognition and synthesis software. Telisma has developed innovative speech-recognition technologies which benefit from over 15 years of research by France Telecom R&D. Telisma products and consulting operations allow telecommunications operators, service providers, and enterprises to easily create and deploy large-scale speech-enabled services.

Taking advantage of the Distributed Speech Recognition (DSR) architecture of Telisma's offer, the densifier reduces drastically the data flow towards the ASR client by porting a set of ASR pre-processing modules onto selected telephony boards. Telisma makes a breakthrough in voice technologies with its densifier, the first and only technology able to save up to 30% in deployment costs and operating expenses on telephony platforms.

TROY Group

http://www.troyxcd.com
sales@troyxcd.com

TROY is a leading independent provider of print servers, and is a leader in the wireless Bluetooth and IEEE 802.11b network connectivity market. The company develops and markets embedded hardware and software networking solutions, leveraging its knowledge and capabilities in the areas of embedded hardware design, networking, print, and wireless protocols, and firmware development.

Two PI

http://www.two-pi.com
info@Two-Pi.com

TWO PI is an independent signal processing house based in Vienna, Austria. They have manifold experience in developing DSP-based products and focus on audio applications. This correlates their in-depth knowledge in the areas of acoustics, psychoacoustics and speech processing.

UB Video Inc.

http://www.ubvideo.com
sales@ubvideo.com

UB Video Inc. develops, markets, and supports software solutions for the delivery and management of multimedia content over wired and wireless networks.

Universidade Federal de Minas (UFMG)

http://www.delt.ufmg.br
paulos@cpdee.ufmg.br

The Electronics Engineering Department is responsible for teaching undergraduate and graduate classes, development of scientific research, and providing consulting services in several Electrical Engineering domains. They include electrical drive systems, power electronics, digital hardware design, signal processing, embedded control, and telecommunications systems.

Vector Software

http://www.vectors.com/codecomposer.html
wso@vectors.com

VectorCAST is a comprehensive software module test system integrated with Code Composer Studio™ IDE for DSP development. VectorCAST assists developers in testing individual software components prior to system test. This state-of-the-art automation includes the tasks of building complete test harnesses, test cases, and execution reports. Prior to VectorCAST, testers were required to manually generate test code to isolate components before any testing could begin. VectorCAST removes this preparation work with automatic test code generation.

Verance

http://www.verance.com
info@verance.com

Verance is a world leader in the development and implementation of technical solutions focusing on the copyright management, royalty distribution, e-commerce, information, marketing, and product distribution needs emerging from the confluence of the entertainment and media industries.

Formed in 1999 as a result of the merger of ARIS Technologies, Inc. (Cambridge, Mass) and Solana Technology Development Corporation (San Diego, CA), Verance holds a significant patent portfolio of proven audio watermarking technologies and applications which have emerged as the core technology component for copyright protection architectures being developed for new digital media formats and distribution systems.

Visual Solutions Incorporated

http://www.vissim.com
info@vissol.com

VisSim combines an intuitive drag-and-drop block diagram interface with a powerful simulation engine. The visual block diagram interface offers a simple method for constructing, modifying, and maintaining complex system models. The simulation engine provides fast and accurate solutions for linear, nonlinear, continuous time, discrete time, time varying, and hybrid system designs.

Customers use VisSim to develop software models, or virtual prototypes, of their systems. VisSim enables them to accurately and quickly simulate the behavior of their system. Once the simulated system meets design criteria, the next step is to develop a controller for the plant. The process of creating embedded controls from VisSim diagrams is automated by the VisSim/Embedded Controls Developer add-on.

Wavemakers

http://www.wavemakers.com
info@wavemakers.com

Wavemakers® develops voice optimization software, including noise and echo cancellation, which focuses on enhancing and reconstructing speech to improve the accuracy of voice user interfaces driving telematics, PDAs, and consumer electronics. Wavemakers' AudioIntelligence® solutions go beyond reducing noise and improving SNR (signal-to-noise ratio) by reconstructing masked or lost information, thereby maximizing recognition accuracy in noisy environments. Our suite of solutions (ClearStream®, eXpressDSP™-compliant VoiceTrigger™, WaveBeam™, and EchoBlock™ has been proven to reduce the error rate of speech recognition systems by as much as 85%. Working with any speech engine, Wavemakers delivers an embedded high-performance but low-cost solution for any far-field microphone application.

Windmill Innovations

http://www.windmill-innovations.com/
info@windmill-systems.com

Windmill Innovations specializes in the design and development of embedded Internet applications, and sophisticated engineering tools. Windmill Innovations' products include the eXpressDSP™-compliant bf3Net TCP/IP Protocol Stack and bf3Scp Serial Communication Protocol for TMS320™ DSP and for the OMAP™ platform.

The bf3Net TCP/IP protocol stack is the world's only eXpressDSP-compliant TCP/IP protocol stack. It offers unsurpassed ease-of-integration and strongly leverages the Texas Instruments eXpressDSP software.

The bf3Scp Serial Communications Protocol is a serial communications architecture for full-duplex communication between a PC and a DSP. It enables the rapid development of Windows™ user interfaces for DSP applications.

WiPro

http://www.wipro.com/
info@wipro.com

Wipro Technologies is among the top two IT companies from India (based on revenue) and is part of the $661 Million Wipro Corporation. Wipro has been operating in the software development market for over a decade and today is one of the leading software companies from India.

Wipro has the privilege of becoming the first software services company in the world to have achieved SEI-CMM Level 5 ranking in process quality. Wipro Technologies started the quality journey in Jan 1995 with ISO 9001 certification.

Wipro leverages a team of over 9500+ software engineers with a varied mix of skills and business expertise, of which nearly half are engaged in the provision of engineering solutions.

Z Tecnologia

http://www.ztec.com.br
ztec@ztec.com.br

Z Tecnologia is an engineering design house specializing in DSP-based telecom, encryption, and security designs. Algorithm expertise in areas of digital/analog modems, encryption, and interest in xDSL and VoP. Z Tecnologia also has TMS320C55x™ DSP experience.

Zandiant Technologies Inc.

http://www.zandiant.com
info@zandiant.com

Zandiant Technologies specializes in system architecture, hardware and software design, and integration of the latest mobile computing, communication, and automotive multimedia products. Zandiant has expertise in DSP implementation in hardware, as well as software algorithms for audio, internet audio, multi-channel audio, optimization, and integration.

Zandiant offers clients time-to-market advantages by providing complete end-to-end design and product solutions, including system architecture, hardware/software development, system integration, prototype, and production. They develop software for embedded Windows™, Linux, and other RTOS-based applications. The company's proficiency with mobile information technologies enables Zandiant to quickly produce easy-to-use, robust telematics devices. Zandiant's expertise in automotive digital audio amplifiers allows them to deliver exceptional, next-generation digital amplifier designs.