Russia,
St. Petersburg

Voice of the Future

Speech Technology Center

SMART LOGGER

Multi-channel call recording and monitoring system.

Applications

Logging and monitoring:

- Telephone conversations
- Facsimile transmission sessions (using Fax Reader module)
- Radio conversations (using noise cancellation feature to improve intelligibility)
- Acoustic signal from any source

Used by:

- Police, Military & National Security Forces
- Security & Emergency Services
- Public Safety Service Centers
- Call Centers & Help Desks
- Legal, Financial& Insurance Institutions
- Governmental Institutions
- Air Traffic Control Sites
- Medical Institutions
- Any organisations that depend on verbal communication

Advantages

- Reliable (24-hour continuous work) & easy-to-use
- Portable, industrial & desktop configurations
- Perfect sound quality (up to 75 dB sound-to-noise ratio)
- Noise cancellation module for increasing speech clarity and playback comfort.
- Analog phone line recording through a telephone interface with non-galvanic coupling to the line with high input impedance
- ISDN S0, E1 digital phone line interfaces
- Supports all major PBX manufactures: Tadiran , Siemens, Philips, Nortel, Lucent, Ericsson.
- Multi-level access restriction
- Network integration for a large scale systems
- Comprehensive search capability
- Text transcription module, view, export and other operations with recordings
- Automatic & manual scheduled archiving on different types of removable media (DVD-RAM, MO, DVD-RW,CD-RW)
- Automatic fax decoding
- Network LAN system and remote control through modem module

Hardware

- 4/8 channel STC-H197/205 boards with telephone interface
- 6 channel STC-H199 board with digital lines interface (STC-H195 adapter is included for connecting to digital lines)
- ISDN PRI E1 system

- All systems include
  - Smart Logger software
  - Documentation
  - Cables and connectors, manuals

Additional Options

- Remote control through modem software module
- Additional playback set based on professional STC sound card or on Sound Blaster compatible card
- Fax Reader facsimile decoding module

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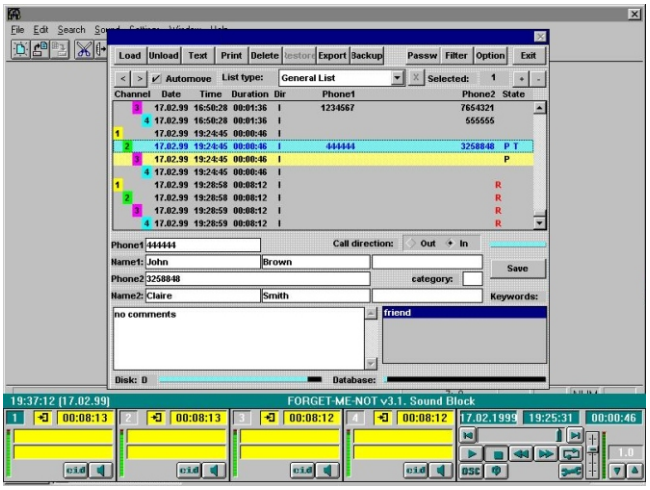


Technical Specifications

- Smart Logger is available as a scalable distributed Network system for call-centers and as a portable system for field applications.
- *Sampling rate:* 8-16 kHz
- *Sound storage:* 128 Kb/s, 64 Kb/s PCM(u-Law), 32 Kb/s ADPCM,16 Kb/s ADPCM
- *Hard Drive consumption per hour (8 kHz sampling rate):* 58 Mb, 29 Mb,14 Mb,7 Mb
- *Signal/noise ratio:* >75 dB for 128 Kb/s bit rate
- *Non-linear distortions:* <0.1%
- *Gain control:* input automatic gain control, output automatic digital gain control, adjustment range up to 50 dB, option to turn off AGC
- *Recording triggers:* voice activation, On/Off hook detection, activation by external sensor, activation by control signals
- *Access restriction:* 4 levels of password system
- *Supported facsimile protocols by Fax Reader II:* V.27-ter,V.29,V.17;T.30,T.4,T.6 (standards of the International Telecommunications Union ITU)
- *Environmental Conditions:* Operating temperature: 5 -40 deg C; Storage temperature: -10 -60 deg C; Humidity: 85% RH(non-condensing) at 40 deg C
- *Requirements:* PC configuration: Pentium III or higher, RAM - 32Mb, HDD>2Gb, MS Windows 95/98/Me and NT/2000.

Features

- All recordings are stored in sound database indexed by date, time, duration, channel number, keywords, DTMF codes, comments
- Database is equipped with sorting and filtering functions
- Access to sound database via LAN and dial-up connection
- High quality recording with or without compression allowing further procedures over sound such as speaker identification, noise filtering or other signal processing
- Telephone interface is galvanically separated from the line and has high input impedance to prevent detection
- DTMF codes, CallerID and other service signals, pulse dialed numbers recognition
- Playback of recorded signals without recording process interruption
- Built-in convenient tool for text decoding of recorded speeches
- Selectable playback speed without voice pitch distortion
- Linking between the typed text and the corresponding sound fragment
- Instant access to any previously recorded sound or typed text
- Sound data export in *.WAV (Windows) or *.DAT(STC/SIS) format
- Operator control is optional
- Distributed LAN configuration for call-centers, emergency services and police
- All possible service for the speech communication channels monitoring team
- Supervision of a number of logging workstations can be done by one system administrator in Smart Logger Network System
- Automatic on-the-fly tuning of the recording settings (threshold adjustment for line and call status, voltage measurement)
- Background auto fax decoding with Fax Reader module. Auto printing of the decoded faxes.
- Optional Sound Blaster compatible playback workstation

Smart Logger Working Window with Waveform Viewer open

Typical Configurations

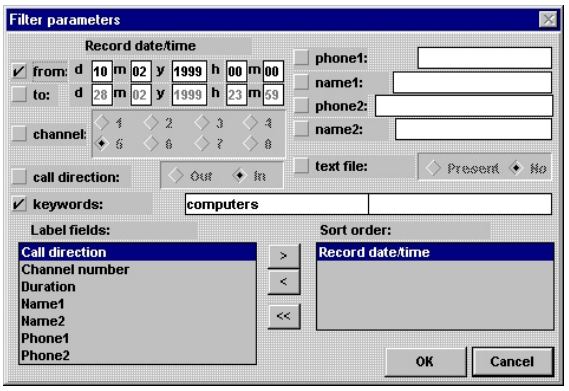
Smart Logger system has an open scalable architecture allowing different configurations for every task. Some configurations samples :

◆ **Configuration Example A:** ***4 channel analog telephone line recording and monitoring station***
Smart Logger recording server configuration: Pentium III system containing professional PCI STC-H197 board with telephone interface, “Smart Logger 4” software, manuals and cables.

◆ **Configuration Example B:** ***16 channel analog telephone line recording with auto fax decoding and remote monitoring***
Smart Logger configuration:
Recording server: Pentium III system with network adapter containing 2 professional PCI STC-H205 boards with telephone interface, Smart Logger software, Fax Reader II software, Remote control via LAN software module, manuals and cables.
Remote monitoring workstation: Pentium III system with Smart Logger additional playback software, manuals and cables.
Recording server and remote monitoring workstation are connected via LAN to allow remote line monitoring and access to the server database.

◆ **Configuration Example C:** ***E1 digital 30 channel recording solution***
Smart Logger recording server configuration: Pentium IV system containing 1x STC-H199_01 board and, if necessary, additional device/adapter, Smart Logger software, manuals and cables

Smart Logger Working Window with Fax Reader Module open



Recordings Search & Filtering dialog box of Smart Logger

◆ **Configuration Example D:** ***Digital extensions 6 channel recording solution for PBX***
Pentium III and above system containing professional STC-H199 digital board, Smart Logger software, manuals and cables.

◆ **Configuration Example E:** ***3 ISDN recording at site A, 6 ISDN recording with auto fax decoding at site B, Remote monitoring via modem from site C***
Smart Logger configuration:
1 Recording server at site A: External adapter providing undetected parallel connection to 3 ISDN lines, Pentium III and above system with modem containing 1 professional STC-H199 digital board, Smart Logger software, Remote control via modem software module, manuals and cables.
2 Recording server at site B: External adapter providing undetected parallel connection to 3 ISDN lines, Pentium III and above system with modem containing 2 professional STC-H199 digital boards, Smart Logger software, Fax Reader software, Remote control via modem software module, manuals and cables.
Remote monitoring workstation at site C: Pentium III and above system with modem and Smart Logger additional playback software, manuals and cables.

Remote monitoring workstation at site C initiates modem connection to the recording servers A or B providing remote access to the server's databases.

Sample Configuration of Distributed LAN Smart Logger System