

## Technical White Paper



### Speakerbus *i* series Turret Integration with SmartRecord® and Proteus Trader

CTI Group announces the integration between its award-winning Proteus® Trader and SmartRecord® applications- now available in a certified Speakerbus solution. The following is an explanation of the technical integration of CTI Group's call recording application, SmartRecord, Proteus Trader call management systems and Speakerbus *i* turret® Solutions.



#### About CTI Group

CTI Group (Holdings), Inc. is an international provider of electronic invoice processing and management, enterprise communications management software and services solutions, and carrier class voice over internet protocol (VoIP) management applications. CTI Group's SmartBill®, SmartRecord® and Proteus® product suites offer a full array of solutions for traffic analysis, post-billing call analysis, customer care and call recording. CTI Group's products are used by some of the top service providers in North America and the United Kingdom, and play a trusted role in managing telephony costs at major corporations internationally. Headquartered in Indianapolis, CTI Group maintains overseas offices in London and Blackburn, UK. For more information, please visit CTI Group's website at [www.ctigroup.com](http://www.ctigroup.com)



## What are the benefits, or competitive differentiators, for Speakerbus with SmartRecord® and Proteus® Trader?

CTI Competitive Differentiators:

- Speakerbus *i* Turret certified call recording and call management solutions available from one source
- One contract and one support desk for both applications
- Integrated and converging roadmap for call recording and call management
- Proven track record in the Trader environment

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### Recording

- Active Recording— sends a replica of the call directly from the selected turret login ID to the recorder. Supports SIP, Direct and Private Lines (ARD/MRD), Hoot n'Holler
- Centralized Storage/Distributed Network—multi-location environments and homeworkers fully supported
- Storage – storage is flexible and can be configured at different levels in the account hierarchy. Number of days to store calls, amount of storage space, and storage locations are configurable. Once a storage device reaches its limit, calls can be archived to offline storage.
- Account Hierarchies – the administrative interface provides the enterprise with the ability to recreate their business hierarchies with relation to locations, divisions, and departments. This provides storage and reporting flexibility by account level.

### Call Management

- Total Telecoms Analysis: Combines *i* Turret and PBX call records in one database for companywide single-view reporting
- Private Wire Utilization: up to the minute statistics on the usage and user activity per Private Wire
- Private Wire Inventory: Enhanced Reporting of Private Wire Utilization with Inventory Detail
- Carrier Cost Validation: allocates costs to a user and department (or cost center) while taking into account least cost routing (LCR)
- Routed Call Analyzer: cost mapping utility allocates the calls made by the Trader via PABX back to his/her unique identification and/or trading group
- Traffic Analysis: provides the usage of trunks across multiple sites to ensure that there is 100% availability, while reducing wasteful overcapacity
- Productivity Analysis: provides a database of customers called and analysis of the productivity in contacting those customers

## How does the system integrate with Speakerbus *i* series and how does it work?

The SmartRecord Recording Server uses the Speakerbus *i* cms (Centralized Management System), *i* cds (Internetworking Call Data Service) and *i* turret devices to record communications. Call audio is passed directly from the *i* turret to SmartRecord via RTP (Real Time Protocol) over UDP (User Datagram Protocol). Call event information is passed from the *i* turret to *i* cds where the CDRs are aggregated and sent to SmartRecord.

Using this integration method, turrets on the system are set up to record in SmartRecord using their station ID. Additionally, the administrator must use *i* cms to set up the turret with a recording device by programming the proper IP address and port information.

The Proteus Trader call management system utilizes Speakerbus *i* cds to transmit call information in the form of call detail records from the turret to the application.

## How to Configure SmartRecord and Proteus Trader on Speakerbus

- Add the number in the SmartRecord Administration system as a part of the account hierarchy.
- Add the IP address and port information for the recorder to the turret via *i cms*.
- Configure *i cms* to send CDR packet data to Proteus (provide *i cms* with the Proteus server IP address)
- *i cms* collects CDR data from the turrets and sends as a packetized stream to Proteus over a TCP connection.
- Proteus has a Speakerbus *i turret* data collection and translation engine that imports the CDR data into the Proteus database.
- Standard Proteus reports, filters and alarms can then be configured to interrogate the data.

### Highlights

- Highly scalable architecture (2048 sites, 250,000 extensions, 20,000 dealer positions) with high availability solutions
- Rapid installation and configuration
- Manage complex voice networks using one central web-based tool
- Manage telephony costs, usage and response times across any number of sites
- Proactive monitoring and alerting on fraudulent activity, under or over utilization, premium rate calls, calls to emergency numbers, unanswered calls, high cost calls and many other call or performance related triggers.
- True multi-tenant recording platform
- No proprietary media player required for recorder

### Call Flow

SmartRecord listens for calls to occur for numbers that have been provisioned in recording system by receiving audio (via RTP) and correlating this audio with CDRs sent by the *i cds* component.

The *i turret* supports the mixing of audio sources. Normally Handset devices are mixed together to provide a single channel. Likewise, the mixing of speakers needs to be supported; normally it's a 4 to 1 mix (however this is configurable e.g. 2 to 1, 6 to 1 etc). The number of voice recording streams generated by each *i turret* can be minimized by mixing handset and speaker channels at the *i turret* to reduce traffic and recorder capacity as necessary. Each *i turret* has the ability to support 2 handsets and 8 speakers which is equal to 10 audio sources that can be recorded. Each *i turret* will support a minimum of 1 and maximum of 3 unicast output recording streams.

The system administrator can decide upon the appropriate recording configuration of the calls that will be presented to the active recording streams by means of a matrix. These are configurable by the *i cms* (centralized management server application). While the intention of the CDR is to identify the user inside the network that is speaking, audio is mixed into these feed even if the user is only listening. This allows recorders to capture conversations that the user doesn't participate in.

