Fire Monitoring Technologies International Inc.

OPEN ACCESS™ Project

Project Component: Basic Interface Communication Specification

Version 0.1

October/2002

Document Updates History

Name	Date	Changes
HBH	Oct 24/02	Rough Draft
HBH	Nov 19/02	Revised

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1 Objective

The objective of this document is to lay out the framework for the communication interface necessary to interact with a Computer Aided Dispatch System from the OPEN ACCESS™ network. It is intended that this document be easily available and accessible within the public domain. In keeping with our intention to make this a truly open interface, all details are included where possible and questions and comments are welcome. Contact information will be provided at the end of the document in the Appendix area.

2 Intended Audience

Anyone who is interested in reading the interface specification particulars between the OPEN ACCESS™ network and a Computer Aided Dispatch environment will be interested in reading this document. We have attempted to keep the language as straight forward as possible. Any and all acronyms will be explained in a dictionary located in the Appendix section at the end of the document.

Anyone looking for an overview of the OPEN ACCESS™ network layout will also find this document of interest.

This document can be downloaded from http://www.openaccess.ca

This interface document is of interest to parties who wish to implement a simple and straight forward method of receiving OPEN ACCESS™ information into their CAD system. This solution will be of interest to smaller departments with one or perhaps two dispatch positions, one of which is manned full time. Limitations of the protocol dictate that the signal will be sent to one single dispatch position all of the time, or it will be broadcast to all positions all of the time.

Those wishing for a more intelligent interface should refer to the document labelled "**OPEN ACCESS™ Project Component: Basic Communication Interface Specification**"

3 Preamble

OPEN ACCESS™ was conceived with the intent of providing a standard solution to the problem of electronically delivering fire alarm signals quickly and reliably to an emergency dispatch centre. FMTI believes that it has achieved this with version 2.0 of OPEN ACCESS™. As the name OPEN ACCESS™ implies, the network will be available to any interested party wishing to participate. For that reason, this standards document will be freely available upon request as described in the previous section.

4 Disclaimer

Many references in this document are made to published Bell Canada interface documents which are copyrighted and as such cannot be reproduced within the confines of this document. We have included as much detail as possible, and the documents required to fill in the blanks can be purchased by contacting Bell Canada through the link provided below.

http://bell.cdn-telco.com

FMTI will endeavour to provide whatever assistance we can to parties interested in obtaining these documents for the purpose of interacting with the OPEN ACCESS™ network.

By using this document, the user agrees that FMTI will have no liability for any consequential, incidental, special, or punitive damage that may result

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5 Introduction

Since the remainder of this document assumes that the reader has some familiarity with the operation of an ALI-CAD interface link, some basic information and background will be covered in this section.

This interface specification is one of two available for interaction with the OPEN ACCESS™ network. The second interface is based the NENA -004 XML system interface specification and can be found on our website www.openaccess.ca.

There are several reasons for choosing to build an interface specification based on an existing specification.

1.) The interface has to be simple to create in order to encourage participation by smaller dispatch software vendors.
   - The Bell BID-0013 specification is reasonably simple to read and understand,
   - The specification is in wide use across the provinces of Ontario and Quebec
   - Many developers who have experience within the emergency services area are familiar with the specification
   - The specification is compact, reliable, and most importantly self contained

2.) The interface has to make sense, be compact and adaptable in a variety of environments
   - There is little overhead (IE secondary acknowledgments, protocol acknowledgements, etc) associated with this specification
   - Both small and large dispatch centres in Ontario and Quebec are using interfaces based on this specification (both map based and non)

3.) Most CAD interface developers are familiar with the Bell specifications already, therefore design and development time is kept to a minimum, keeping the cost to implement reasonable.
   - If a CAD system can accept an e9-1-1 data feed, the system can accept an OPEN ACCESS™ Basic Interface Data Feed. This interface can literally be enabled with no development on the CAD vendors part

****Important Note****

Part of the Bell specification includes the transmission of a CAD position number identifier, determined by whichever call taker answers the call. Since this interface transmits data only, the CAD position number must be forced. This means that the transmission can be sent to one particular dispatch position every time, or it can be broadcast to all positions. These are the only two options.

This interface also does not provide any facility to transmit a call type identifier.

6 Communication Link Characteristics

The Physical communication link characteristics can be found in the Bell BID-0013 Document “Data Transmission Protocol for ALI-CAD Communications Using Service Address Appendix 2 to BID-0013”, “Terminal to ALI Interface”.

Physical characteristics are laid out on page A2-28

7 OPEN ACCESS™ Message Protocol

The OPEN ACCESS™ Message Protocol will follow the Bell Canada BID-0013; Appendix 2 document entitled “Data Transmission Protocol for ALI-CAD Communications Using Service Address”. The message and data definition type used will be Message Type 6, found on page A2-18.

8 Appendices

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Appendix 1 Glossary of terms

ACK
Communication terminology indicating that a transmission was received successfully

ALI-CAD INTERFACE
Computer to computer interface between telephone company equipment and Computer Aided Dispatch equipment

ALI
Automatic Location Identifier

ANI
Automatic Number Identifier

Asynchronous
Communication term used to specify that traffic need not be at specific timed intervals

BCC
Block Check Character. Used to determine the accuracy of a transmission

Baud Rate
Speed at which data flows over a communications link

CAD
Computer Aided Dispatch

Child Elements
XML term referring to particular tags required by to convey additional information about a particular parent piece of data

E9-1-1
Enhanced 9-1-1. Delivery of specific electronic location data to a dispatch centre for the purpose of dispatching emergency help

Element
XML term referring to a piece of data

Element tags
Names given to identify a particular piece of data. Like fields in a database

ETX
Communication term referring to end of transmission

FRED
First Response Electronic Dispatcher

Full Duplex
Communication term referring to the ability to transfer data in two directions at the same time.

Heartbeat
Communication term referring to a periodic transmission between systems used to monitor the hardware link status

NAK
Communication term used to indicate unsuccessful data transmission

OPEN ACCESS™
Term used to describe the network and equipment required to deliver an alarm signal to a Fire Department

OPEN ACCESS™ Basic Communication Interface
Communication interface based on Bell BID-0013 interface specification to deliver alarm data to a Fire Dept electronically

Parity
Method used to determine data validity and correctness

PSAP
Public Safety Answering Point

ROOT
Element at the top of a tree structure. All subsequent elements fall below this point

Start Bit
A change in bit status to indicate that data is beginning to flow over a data link

Stop Bit
A change in bit status to indicate that data flow is ending

STX
Character indicating the beginning of a data message

VER40NENA
Version 4.0 NENA recommended standard

XML
Extensible Mark-up Language

Appendix 2 Contact Information

OPEN ACCESS web site: www.openaccess.ca

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