Dunwoody
Smart people – Smart city

MEMORANDUM

To:	Mayor and City Council
From:	Kimberly Greer, Assistant to the City Manager
Date:	March 24, 2014
Subject:	**Update on CAD-to-CAD Interface**

BACKGROUND

In October 2011, the Chattahoochee River 911 Authority (ChatComm) began answering and dispatching Dunwoody's 9-1-1 calls. Police service calls constitute approximately 90% of the City's emergency call volume. Since the transition, the average amount of time needed to dispatch police calls has been cut in half, moving from an average of 4 minutes and 33 seconds down to an average of 2 minutes and 13 seconds.

DeKalb County continues to provide fire and emergency medical service to the City including the dispatching of those resources. Since the transition, calls requiring fire or emergency medical service have been transferred using the industry standard, one-button transfer. Fire and emergency medical service calls constitute approximately 10% of the City's emergency call volume or roughly 10 calls per day. The average amount of time needed to transfer calls between the two centers is approximately 90 seconds.

To surpass the industry standard one-button transfer method and eliminate the associated transfer time, staff has been coordinating the development of a Computer Aided Dispatch (CAD)-to-CAD interface to connect ChatComm's CAD system to DeKalb's CAD system. Once completed, this interface will allow the call information for fire and emergency medical service calls to be electronically shared and eliminate the transfer time.

UPDATE

Since the Council Meeting on March 10, staff has been focused on the four final issues identified in February's center-to-center testing call.

For two of the issues (the fire response zone mapping/staging issue and the issue related to how address are displayed for incidents on Interstate 285), InterAct (DeKalb's CAD system vendor) has made some programming changes and is in preliminary testing.

The final two issues relate to the transference of certain determinant codes from ChatComm to DeKalb. This issue will be addressed by a table which translates the information between two CAD systems. Staff reached out to InterAct to determine how long it would take to complete the necessary work. InterAct refused to complete the programing for the translation table on their side of the interface. Staff is working with OSSI/SunGard (ChatComm's CAD system vendor) to determine how long it would take and how much it would cost to complete the translation table on their side of the interface.

Dunwoody
*Smart people – Smart city

March 10, 2014

Mr. John McNulty
President and Chief Executive Officer
Interact Public Safety
Global Headquarters
102 W 3rd St., Ste 750
Winston-Salem, NC 27101

RE: Dunwoody-DeKalb CAD-to-CAD Interface Project

Dear Mr. McNulty:

I am writing this letter in hopes that your assistance may improve an exceedingly frustrating and disappointing experience my community continues to have with a project we are working on with your firm.

As a matter of background, in October 2011 the City of Dunwoody transitioned 911 call-taking services from DeKalb County to the Chattahoochee River 911 Authority (ChatComm). ChatComm provides call-taking and police dispatch but DeKalb County continues to dispatch our fire and emergency medical services.

Prior to the transition, we embarked on a project to connect these two 911 centers through a CAD-to-CAD interface between OSSI Sungard (CAD provider for Dunwoody and ChatComm) and InterAct Public Safety (CAD provider for DeKalb County).

All major development on the interface was completed in early 2012. It is now March 2014 and we continue to face delay after delay in testing to complete this project. The testing phase of the project has been a disastrous set of failures.

The Mayor and City Council are furious that this process has taken several years and is still incomplete. My staff and I have run out of answers as to why this project has been ongoing for nearly three years.

The public pressure has mounted to get this project completed to levels I haven't seen in my 17 years in local government. Frankly, the reputation of the City, our service providers and the vendors responsible for completing the job has suffered mightily. Every missed deadline and additional "bug" in the interface that prevents the system from working properly is growing the discontent astronomically.

I am at the breaking point with my patience with the failure of this interface to work properly. Your immediate attention is critical to bring this matter to a successful conclusion.

Sincerely,

Warren Hutmacher
City Manager

Michael G. Davis Mayor

Denis Shortal City Council Post 1
Jim Riticher City Council Post 2
Doug R. Thompson City Council Post 3

Terry Nall City Council Post 4
Lynn Deutsch City Council Post 5
John Heneghan City Council Post 6

-5-

March 19, 2014

Mayor Mike Davis
City of Dunwoody
41 Perimeter Center East, Suite 250
Dunwoody, GA 30346

Re: CAD-to-CAD Interface between Dunwoody and DeKalb County

Mayor Davis,

I am writing to you in response to a letter received on March 11, 2014 from Mr. Hutmacher outlining the city council's disappointment in the progress of the CAD-to-CAD interface between Dunwoody and DeKalb County's CAD systems that AT&T has contracted InterAct to complete on behalf of Dunwoody.

While I understand the frustration that you, the city council and your city manager have, InterAct is not solely responsible for either the project or issues outlined in the letter. I believe we have demonstrated good faith in trying to get this project completed and we will continue to support our customers, AT&T and DeKalb County, in their efforts to implement the interface.

During the recent city council meeting, Mr. Hutmacher claimed that the CAD-to-CAD interface between the two systems had failed testing and is not functional. This is not an accurate representation of the facts. The interface has passed all functional tests as outlined in the original SRD and has passed all of the additional functional tests following each of the additional six change requests received since we began this project on October 20, 2011. In fact, each of the change requests we have received were a direct result of additional findings uncovered during center-to-center testing and may have been avoided if the project had been properly defined and scoped from the beginning by the City of Dunwoody.

From my experience, not properly scoping a project prior to beginning software development guarantees "scope creep", confusion, and delayed implementation. Given that InterAct can only provide input of what the CAD-to-CAD interface project could include from the perspective of our own customer's operational standards, it is clearly the responsibility of Dunwoody to provide clear direction and oversight into their own system so that all parties involved can work quickly to deliver a solution.

Based on an email that we received from Ashley Smith on March 3rd, 2014, there are currently four outstanding issues that were discussed during the Dunwoody city council meeting following the most recent center-to-center testing on February 27th, 2014. I have attached an outline of the outstanding issues for your reference.

Despite the significant engineering effort expended in developing this interface, InterAct has not yet received any compensation for work performed on behalf of Dunwoody through AT&T. We have reviewed the record of change orders and identified 275 additional hours of work completed that far exceeds the original purchase order InterAct received from AT&T. InterAct will be submitting an incremental invoice through AT&T for $48,125.00 under the same terms and conditions of the original contract. Given the circumstances, we will require 50% payment within 30 days to reflect work performed to date related to the original contract.

For the project to be completed the interface specification must be completely finalized and Dunwoody must take ownership of managing this project to completion. We have also attached a number of supporting documents that InterAct has provided to all parties involved with this project. Included are the following:

- Summary of issues discovered during the February 2014 interface CAD to CAD testing
- History of the InterAct Software Requirements Document change requests
- Summary description of Software Requirements Document changes requested
- Signed copy of Software Requirements Document from December 2011

With the submission of this letter, we respectfully decline your meeting invitation to the March 24th city council meeting. Should you have any additional questions, please contact our Senior Project Manager, Edward Scheumann, at 859.351.6425.

Sincerely,

John McNulty
President & CEO
direct: +1 336.397.5300

CC: Dunwoody City Council, Dunwoody City Manager

Enc.

Dunwoody
*Smart people – Smart city

December 2, 2011

William Z. Miller
Director of Public Safety
1960 W. Exchange Place
Tucker, GA 30084

Dear Director Miller,

Please find enclosed two copies of the final version of the Software Requirements Document detailing the technical specifications for the CAD-to-CAD Interface. If you could review and sign the last page of each copy it would be most appreciated.

Once signed, we need to transmit the documents to InterAct Public Safety for their signature. I would be happy to coordinate this step in the process if that is easier for you. I can be reached by e-mail at kimberly.greer@dunwoodyga.gov or by phone at (678) 382-6709.

On behalf of the City of Dunwoody, thank you again for your help throughout this process and for the service that your 911 center provides to the City of Dunwoody.

Sincerely,

Kimberly Greer
Assistant to the City Manager

Ken Wright *Mayor*

Denis Shortal *City Council Post 1*
Adrian Bonser *City Council Post 2*
Doug R. Thompson *City Council Post 3*

Robert Wittenstein *City Council Post 4*
Danny Ross *City Council Post 5*
John Heneghan *City Council Post 6*

-9-

InterAct CAD – City of Dunwoody Project

Software Requirements Document
InterAct CAD to OSSI CAD Interface

InterAct Public Safety Systems
102 W 3rd St., Ste 750
Winston–Salem, NC 27101
http://www.interact911.com/

InterAct Public Safety Systems

CAD to CAD Interface

#G.1.

VERSION CONTROL

Project Name:	City of Dunwoody, GA
File Name:	InterAct CAD to OSSI CAD Interface
Document Template:	SRD
Date Created:	October 4th, 2011
Date Completed:	

Version	Ver. Date	Details	Author
1.0	10/07/2011	Draft	Jessica Enewold
1.1	10/20/2011	Updated SRD • Removed Map, Response Area, Phone Pick up time, Caution Notes and Hazmat (not supported by the API • Added comments to section 1.2.2 regarding heartbeat intervals • Added section 1.3.2.1.4	Jessica Enewold
1.2	10/27/2011	Updated SRD • Modified section 1.3.2.1.4 • Added section 1.3.2.1.5	Jessica Enewold
1.3	11/02/2011	Updated SRD • Added section 1.3.2.1.6 • Added section 1.3.2.2.3	Jessica Enewold

1. INTERACT

1.1 INTRODUCTION

InterAct will provide an interface between InterAct's CAD and OSSI's CAD. The interface will be developed using the "CAD to CAD Interoperability" API published by Tri-Tech Software Solutions.

1.1.1 REQUIREMENTS:

The following requirements were defined by the City of Dunwoody as mandatory:
   a. Heartbeat connection and notification if the connection is down.
   b. Ability to send an incident created in OSSI CAD to InterAct CAD.
   c. Ability for OSSI and InterAct CAD to enter incident updates and have them reflected in both systems.

1.1.2 PURPOSE OF THE SOFTWARE CUSTOMIZATION

The CAD to CAD interface is designed to allow the bi-directional transfer of specific incident information between two or more CAD systems.

1.1.3 TERMS, DEFINITIONS, ABBREVIATIONS AND ACRONYMS

TERM	DEFINITION
CAD	Computer Aided Dispatch software
Remote CAD system	InterAct's CAD

Page 1

1.2   COMMUNICATIONS METHOD

1.2.1 TCP/IP NETWORK COMMUNICATION

The IP network communication protocol will be implemented for the CAD to CAD interface. The CAD to CAD interface can be configured as a "Server" which listens to the incoming connection on a configurable port. Or it can be configured as a "Client", which initializes the connection to a Server application on a specified port. All the data will be sent via a TCP/IP socket. The interface can be configured to listen to a port range of 49,152 to 65,535.

API = 3.1

1.2.2 HEARTBEAT

The OSSI CAD will be configured to send a heartbeat package at periodic intervals to the InterAct CAD system to test the connectivity. Heartbeat packets require a reply from the InterAct CAD interface. If a heartbeat acknowledgment is not received from the InterAct CAD system, the OSSI interface will resend the heartbeat message. When the number of retries is attempted and still no acknowledgment received, the OSSI interface will consider the connection to be lost, and the OSSI interface will send out notification message via the CAD Messaging system to pre-defined users on the OSSI CAD system.

The interval for sending the Heartbeat will be determined and configured by OSSI CAD.

The InterAct CAD system will send an automatic alert to the Attendant Window of currently logged in users notifying them that a heartbeat was not received within a specified time. The InterAct CAD system will attempt to reconnect until a connection is re-established. Once the connection is re-established an automatic alert will be sent to the Attendant Window of currently logged in users notifying them the connection has been made. The InterAct CAD system will only automatically alert after at least one heartbeat has been received by OSSI.

The interval for detecting that a Heartbeat was not received will be configured by InterAct CAD

API = 6.1, 6.2

1.3 CAD TO CAD FUNCTIONALITY

1.3.1 FUNCTIONAL OVERVIEW

The primary object of the CAD to CAD interface is to transfer or receive incident data between two CAD systems. Once an incident is initially transferred from one CAD system to another, the incidents are the linked between the two CAD systems. This section describes the functionality that will be supported.

1.3.2 INCIDENT SHARING

1.3.2.1 SENDING NEW INCIDENTS
API = 6.3, 6.4

1.3.2.1.1 To initiate a transfer of a new incident to be sent to InterAct CAD, a dispatcher will manually request a transfer of the incident via the OSSI CAD command line or via a button on the incident display screen.

1.3.2.1.2 Below are the incident data elements that should be sent to InterAct CAD if available.

• CAD Master Incident Number	Incident Number
• Problem Nature	Event Code
• Incident Type	TBD
• Priority Number	Event Code Priority
• Address	Address
• House Number	House Number
• House Number Suffix	House Number Suffix
• Prefix Directional	Prefix Directional
• Street Type	Street Type
• Post Directional	Post Directional
• Apartment	Apartment
• Building	Building

Software Requirements Document

• City	Community
• Location Name	Location Information
• Cross Street	Cross Street
• Caller Name	Caller Name
• Call Back phone	Phone Number
• Response Date (record creation)	Created Time
• Current Date & Time	Send Time
• Incident Comments (most recent first, to oldest last)	Remarks

1.3.2.1.3 InterAct CAD will respond with an acknowledgement indicating the incident was received within a specified waiting period (10 second wait period with 3 retries), the interface will send a "Failed to Send Incident" notification message via the CAD Messaging system to a predefined CAD notification group. In addition, all subsequent incident updates for unacknowledged incidents from the OSSI CAD system will be ignored due to the lack of a InterAct CAD incident number/reference.

1.3.2.1.4 The "Problem Nature" sent from OSSI CAD must match the existing "Event Codes" in InterAct CAD. If an incident is transferred from OSSI CAD and the Problem Nature doesn't match an existing Event Code in InterAct CAD, the incident will be created using a default Event Code. InterAct CAD will not be responsible for any mapping between OSSI CAD Problem Nature codes and InterAct CAD Event Codes.

1.3.2.1.5 The InterAct CAD system will always create the incident using a default ESN. This will ensure the incident is routed to the appropriate users.

        1.3.2.1.6 The InterAct CAD system will support the transfer of the information obtained using Priority Dispatch software as long as that data is transferred from OSSI CAD in the defined fields outlined in 1.3.2.1.2

1.3.2.2 INCIDENT UPDATES
API = 6.5

        1.3.2.2.1 If an incident has been transferred to the InterAct CAD system, then the subsequent updates of specific fields on the incident from either OSSI or InterAct CAD will trigger an incident update message to the incident.

        1.3.2.2.2 The data elements that can be configured to trigger an incident update are:

- Problem Nature
- Address
- City
- Apartment
- Location Name
- Priority
- Comments
- Building
- Call Back Phone
- Caller Name
- Cross Street

        1.3.2.2.3 If the Problem Nature is changed in the InterAct CAD on an open incident an update will be sent to OSSI CAD. It is OSSI's responsibility to determine how to handle any mismatches. (Please see 1.3.2.1.4 as to how InterAct will handle any mismatches when receiving data from OSSI CAD.

1.3.2.3 INCIDENT CANCELLATION
API = 6.7

        1.3.2.3.1 If an incident that has been sent from OSSI CAD to the InterAct CAD system is cancelled within OSSI CAD, the cancellation event will trigger

the sending of an incident cancellation request to the InterACT CAD system. The cancellation request will include the reason and disposition.

1.3.2.3.2 The InterAct CAD system will add the cancellation request information to the narrative section of the incident. InterAct CAD will not automatically close the incident.

1.3.2.3.3 If an incident that has been sent from OSSI CAD to the InterAct CAD system is cancelled within InterACT CAD, the cancellation event will trigger the sending of an incident cancellation request to the OSSI CAD system.

1.3.2.4 INCIDENT COMPLETION (CALL CLOSING)
API = 6.6

1.3.2.4.1 When a CAD Incident is closed in OSSI, the interface shall generate and send a Call Closed message to the InterAct CAD system. The message will provide the close reason and disposition, if available.

1.3.2.4.2 The InterACT CAD system will add the incident completion information to the narrative section of the incident. InterAct CAD will not automatically close the incident.

1.3.2.4.3 When a CAD Incident is closed in InterAct CAD, the closed event will trigger the sending of an incident completion request to the OSSI CAD system.

1.4   CONTACT INFORMATION

Jessica Enewold
InterAct Director of Product Management
360-593-3896
jenewold@interact911.com

1.1.4 CUSTOMER APPROVAL & SIGNOFF

INTERACT:

Name Alfred Rocky Moore

Title Senior Project Manager

Signature *Alfred R Moore*

Date 12/2/2012

CITY OF DUNWOODY:

Name Warren Hutmacher

Title City Manager

Signature W A. H

Date 12/01/11

CHATTAHOOCHEE RIVER 911 AUTHORITY (ChatComm):

Name John Kachmar

Title Chairman

Signature *[signature]*

Date 12/01/11

DEKLAB COUNTY 911:

Name WZMiller William Z Miller

Title 911 Director

Signature WZMiller

Date 12/2/2011

Below are the most current issues Dunwoody has identified based on an email InterAct received from Ashley Smith on March 3rd, 2014. We have worked with Dunwoody to identify work arounds in the spirit of moving the project forward to successful completion.

- Interstate 285 westbound and eastbound not transferring correctly through the InterAct interface.
  - Many 9-1-1 automobile accidents calls involve cross streets rather than a street address. OSSI stores cross street locations differently from InterAct. OSSI separates the two street names using a forward slash "/" while InterAct uses an ampersand "&". This difference was not noticed until the February 14th, 2014 system testing. During the same test where the slash issue was found, the cross street address used had I-285 freeway as the first of the two streets. Dunwoody OSSI sent "285 EB/Ashford Dunwoody Road". Even after replacing the "/" with an "&" InterAct found that DeKalb could not interpret the location because Interstate 285 is entered as "I285" and interpreted as a house number.
  - InterAct has identified a fix by modifying the InterAct half of the interface by replacing all "/" in incoming addresses to "&". The issue of using "285" as a street in the DeKalb MSAG was tested and found to be un-achievable. The "I" prefix would need to be inserted on the input freeway number in order for the cross streets to validate in the DeKalb CAD.
  - Both of these resolutions will need to be tested in another end-to-end system test.
- Street addresses transferred through the InterAct interface are not bringing up the correct Fire Zone
  - One of the ways that CAD knows how to recommend the proper fire department is by separating the map of addresses into Communities. DeKalb staff sets the Communities in the DeKalb CAD as are Dunwoody's. During testing the address 2151 Peachford Road sent from Dunwoody as a Community address supplied by OSSI CAD. When the same address is typed into the DeKalb CAD, the Community was set to "Atlanta" and the Jurisdiction as the "City of Dunwoody".
  - This can be easily fixed by configuring the OSSI CAD to send "Atlanta" in the Community field of the interface and by confirming that all of Dunwoody is the Community of Atlanta in the DeKalb CAD.
- Dunwoody ProQA medical emergency codes have a lower case alphanumeric format that will not successfully transfer the correct code to DeKalb.
  - Medical event codes are formatted differently in the Dunwoody and DeKalb call centers. This prevents applying the appropriate urgency to an incident and is the result of different coding approaches taken when configuring ProQA (a third party vendor product) – this has nothing to do with the InterAct interface. DeKalb uses an interpretation table that changes the ProQA code a lower case

letter (e.g. 29D02___m___) while Dunwoody uses an upper case letter (e.g., **<u>SIG</u>**47). The InterAct and OSSI CAD systems will interrupt these codes differently potentially creating a problem applying the correct code to an emergency.

- o The recommended fix is for Dunwoody and DeKalb IT personnel to agree on a translation table that can be implemented in the OSSI CAD. Once completed, Dunwoody can successfully push a properly coded CAD event to the DeKalb CAD system.

- Dunwoody ProQA fire codes have a lower case alphanumeric format that will not successfully transfer the correct code to DeKalb.

    - o Refer to the proposed resolution as outlined in item #3.

History of Dunwoody interface change requests for InterAct CAD to CAD project:

V1.1 10/27/2011
- Original Software Requirements Document distributed

V1.2 10/27/2011
- Modified section 1.3.2.1.4
- Added section 1.3.2.1.5

Was

1.3.2.1.4 The event code sent from OSSI CAD must match the event codes in InterActCAD

Change to

1.3.2.1.4 The "Problem Nature" sent from OSSI CAD must match the existing "Event Codes" in InterAct CAD. If an incident is transferred from OSSI CAD and the Problem Nature doesn't match an existing Event Code in InterAct CAD, the incident will be created using a default Event Code. InterAct CAD will not be responsible for any mapping between OSSI CAD Problem Nature codes and InterAct CAD Event Codes.

Added

1.3.2.1.5 The InterAct CAD system will always create the incident using a default ESN. This will ensure the incident is routed to the appropriate users.

V1.3 11/02/2011
- Added section 1.3.2.1.6
- Added section 1.3.2.2.3

Added

1.3.2.1.6 The InterAct CAD system will support the transfer of the information obtained using Priority Dispatch software as long as that data is transferred from OSSI CAD in the defined fields outlined in 1.3.2.1.2

1.3.2.2.3 If the Problem Nature is changed in the InterAct CAD on an open incident an update will be sent to OSSI CAD. It is OSSI's responsibility to determine how to handle any mismatches. (Please see 1.3.2.1.4 as to how InterAct will handle any mismatches when receiving data from OSSI CAD.

V1.4 03/23/2012 (typo on the SRD listing these as 1.2.1.2.1 and 1.2.1.2.2)
- Modified section 1.2.1
- Modified section 1.2.2

Was

1.2.1 TCP/IP NETWORK COMMUNICATION
The IP network communication protocol will be implemented for the CAD to CAD interface. The CAD to CAD interface can be configured as a "Server" which listens to the incoming connection on a configurable port. Or it can be configured as a "Client", which initializes the connection to a Server application on a specified port. All the data will be sent via a TCP/IP socket. The interface can be configured to listen to a port range of 49,152 to 65,535.
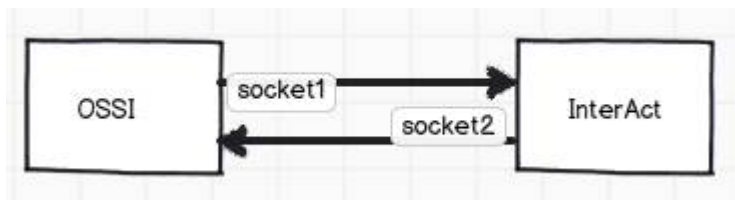
API = 3.1

Changed to

1.2.1 TCP/IP NETWORK COMMUNICATION

The IP network communication protocol will be implemented for the CAD to CAD interface. This implementation is a Dual-Socket approach whereby there is a host and client socket on both sides. The InterAct interface shall be configured as a "Server" which listens tothe incoming connection on a configurable port and shall be configured as a "Client", which connects to the OSSI Server application on a configurable port. All the data will be sent via these dual TCP/IP sockets. The InterAct "Server" socket will only receive data. The InterAct "Client" socket will only send data.

In the diagram above, OSSI connects it's "client" to the InterAct "server" or "host" on socket1. All data, including heartbeat, is sent from OSSI to InterAct over socket1. Likewise, InterAct connects it's "client" to the OSSI "server" or "host" on socket2. All data, including heartbeat, is sent from InterAct to OSSI on socket2. For clarification, InterAct will not send any data on socket1, nor will it receive any data on socket2.
API = 3.1

Was

1.2.2 HEARTBEAT

The OSSI CAD will be configured to send a heartbeat package at periodic intervals to the InterAct CAD system to test the connectivity. Heartbeat packets require a reply from the InterAct CAD interface. If a heartbeat acknowledgment is not received from the InterAct CAD system, the OSSI interface will resend the heartbeat message. When the number of retries is attempted and still no acknowledgment received, the OSSI interface will consider the connection to be lost, and the OSSI interface will send out notification message via the CAD Messaging system to pre-defined users on the OSSI CAD system.

The interval for sending the Heartbeat will be determined and configured by OSSI CAD.

The InterAct CAD system will send an automatic alert to the Attendant Window of currently logged in users notifying them that a heartbeat was not received within a specified time. The InterAct CAD system will attempt to reconnect until a connection is re-established. Once the connection is re-established an automatic alert will be sent to the Attendant Window of currently logged in users notifying them the connection has been made. The InterAct CAD system will only automatically alert after at least one heartbeat has been received by OSSI.

The interval for detecting that a Heartbeat was not received will be configured by InterAct CAD
API = 6.1, 6.2

Changed to

1.2.2 HEARTBEAT

The OSSI CAD will be configured to send a heartbeat package at periodic intervals to the InterAct CAD system to test the connectivity. Heartbeat packets require a reply from the InterAct CAD interface. If a heartbeat acknowledgment is not received from the InterAct CAD system, the OSSI interface will resend the heartbeat message. When the number of retries is attempted and still no acknowledgment received, the OSSI interface will consider the connection to be lost, and the OSSI interface will send out notification message via the CAD Messaging system to pre-defined users on the OSSI CAD system.

The interval for sending the Heartbeat will be determined and configured by OSSI CAD.

The InterAct CAD system will send an automatic alert to the Attendant Window of currently logged in users notifying them that a heartbeat was not received within a specified time. The InterAct CAD system will attempt to reconnect until a connection is re-established. Once the connection is re-established an automatic alert will be sent to the Attendant Window of currently logged in users notifying them the connection has been made.   The InterAct CAD system will only automatically alert after at least one heartbeat has been received by OSSI.

The interval for detecting that a Heartbeat was not received will be configured by InterAct CAD

+++InterAct will not send Heartbeat messages. It will only send Heartbeat Acks.
API = 6.1, 6.2

V1.5 06/20/2012
- Modified section 1.2.2

<u>Was</u>
1.2.2 HEARTBEAT
The OSSI CAD will be configured to send a heartbeat package at periodic intervals to the InterAct CAD system to test the connectivity. Heartbeat packets require a reply from the InterAct CAD interface. If a heartbeat acknowledgment is not received from the InterAct CAD system, the OSSI interface will resend the heartbeat message. When the number of retries is attempted and still no acknowledgment received, the OSSI interface will consider the connection to be lost, and the OSSI interface will send out notification message via the CAD Messaging system to pre-defined users on the OSSI CAD system.

The interval for sending the Heartbeat will be determined and configured by OSSI CAD.

The InterAct CAD system will send an automatic alert to the Attendant Window of currently logged in users notifying them that a heartbeat was not received within a specified time. The InterAct CAD system will attempt to reconnect until a connection is re-established. Once the connection is re-established an automatic alert will be sent to the Attendant Window of currently logged in users notifying them the connection has been made.   The InterAct CAD system will only automatically alert after at least one heartbeat has been received by OSSI.

The interval for detecting that a Heartbeat was not received will be configured by InterAct CAD

+++InterAct will not send Heartbeat messages. It will only send Heartbeat Acks.
API = 6.1, 6.2

#G.1.

Changed To
1.2.2 HEARTBEAT
The OSSI CAD will be configured to send a heartbeat package when they have not received a heartbeat from InterAct CAD.

The InterAct CAD system will send an automatic alert to the Attendant Window of currently logged in users notifying them that a heartbeat was not received within a specified time. The InterAct CAD system will attempt to reconnect until a connection is re-established. Once the connection is re-established an automatic alert will be sent to the Attendant Window of currently logged in users notifying them the connection has been made.   The InterAct CAD system will only automatically alert after at least one heartbeat has been received by OSSI.

The interval for detecting that a Heartbeat was not received will be configured by InterAct CAD

+++InterAct will not send Heartbeat messages. It will only send Heartbeat Acks.
API = 6.1, 6.2

V1.6 10/29/2012 - this is a typo on the version change note. Is should state:
  • Modified section 1.3.2.1.2
  • Added Section 1.3.2.1.7

Was
1.3.2.1.2 Below are the incident data elements that should be sent to InterAct CAD if available.

• CAD Master Incident Number	Incident Number
• Problem Nature	Event Code
• Incident Type	TBD
• Priority Number	Event Code Priority
• Address	Address
• House Number	House Number
• House Number Suffix	House Number Suffix
• Prefix Directional	Prefix Directional
• Street Type	Street Type
• Post Directional	Post Directional
• Apartment	Apartment
• Building	Building
• City	Community
• Location Name	Location Information
• Cross Street	Cross Street
• Caller Name	Caller Name
• Call Back phone	Phone Number
• Response Date (record creation)	Created Time

InterAct Software Requirements Document Change Tracker

• Current Date & Time	Send Time
• Incident Comments (most recent first, to oldest last)	Remarks

 Changed to

1.3.2.1.2 Below are the incident data elements that should be sent to InterAct CAD if available.

• CAD Master Incident Number	Incident Number
• ProQA Determinant	Event Code
• Problem Nature	Event Code
• Incident Type	TBD
• Priority Number	Event Code Priority
• Address	Address
• House Number	House Number
• House Number Suffix	House Number Suffix
• Prefix Directional	Prefix Directional
• Street Type	Street Type
• Post Directional	Post Directional
• Apartment	Apartment
• Building	Building
• City	Community
• Location Name	Location Information
• Cross Street	Cross Street
• Caller Name	Caller Name
• Call Back phone	Phone Number
• Response Date (record creation)	Created Time
• Current Date & Time	Send Time
• Incident Comments (most recent first, to oldest last)	Remarks

 Added

1.3.2.1.7 OSSI is responsible for programming an additional field in the CADtoCAD interface with the xml specification tag(<ProQADeterminant></ProQADeterminant>. This will pass the full PROQA determinant to InterACT CAD. IA will attempt to validate that determinant as an Event Code, if it does not exist, then IA will default to the OSSI Problem Nature that has been passed. If the Problem Nature and ProQA Determinant are not found in InterACT CAD, InterACTCAD will validate using the default Event code configured.   IA will not translate the PROQA determinant sent, but will attempt the validation as stated above.

V1.7 06/03/2013
  •   Modified section 1.4 and added 1.1.4 Customer Approval and Signoff

#G.1.

InterAct CAD – City of Dunwoody Project

Software Requirements Document
InterAct CAD to OSSI CAD Interface

#G.1.

InterAct Public Safety Systems

CAD to CAD Interface

VERSION CONTROL

Project Name:	City of Dunwoody, GA
File Name:	InterAct CAD to OSSI CAD Interface
Document Template:	SRD
Date Created:	October 4th, 2011
Date Completed:	

Version	Ver. Date	Details	Author
1.0	10/07/2011	Draft	Jessica Enewold
1.1	10/20/2011	Updated SRD	Jessica Enewold
		• Removed Map, Response Area, Phone Pick up time, Caution Notes and Hazmat (not supported by the API • Added comments to section 1.2.2 regarding heartbeat intervals • Added section 1.3.2.1.4	
1.2	10/27/2011	Updated SRD	Jessica Enewold
		• Modified section 1.3.2.1.4 • Added section 1.3.2.1.5	
1.3	11/02/2011	Updated SRD	Jessica Enewold
		• Added section 1.3.2.1.6 • Added section 1.3.2.2.3	
1.4	03/23/2012	Updated SRD	Gloria Street
		• Modified section 1.2.1.2.1 • Modified section 1.2.1.2.2	
1.5	06/20/2012	Updated SRD • Modified section 1.2.2	Gloria Street
1.6	10/29/2012	Updated SRD • Modified section 1.2.2	Gloria Street
1.7	06/03/2013	Updated SRD • Modified section 1.3.2.1.2 • Modified section 1.3.2.1.7	Gloria Street

1. INTERACT

1.1 INTRODUCTION

InterAct will provide an interface between InterAct's CAD and OSSI's CAD. The interface will be developed using the "CAD to CAD Interoperability" API published by Tri-Tech Software Solutions.

1.1.1 REQUIREMENTS:

The following requirements were defined by the City of Dunwoody as mandatory:
  a. Heartbeat connection and notification if the connection is down.
  b. Ability to send an incident created in OSSI CAD to InterAct CAD.
  c. Ability for OSSI and InterAct CAD to enter incident updates and have them reflected in both systems.

1.1.2 PURPOSE OF THE SOFTWARE CUSTOMIZATION

The CAD to CAD interface is designed to allow the bi-directional transfer of specific incident information between two or more CAD systems.
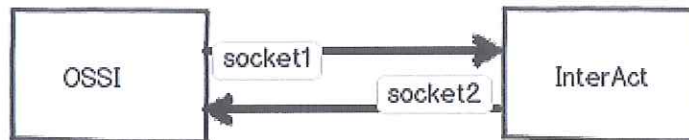
1.1.3 TERMS, DEFINITIONS, ABBREVIATIONS AND ACRONYMS

TERM	DEFINITION
CAD	Computer Aided Dispatch software
Remote CAD system	InterAct's CAD

1.2   COMMUNICATIONS METHOD

1.2.1 TCP/IP NETWORK COMMUNICATION

The IP network communication protocol will be implemented for the CAD to CAD interface. This implementation is a Dual-Socket approach whereby there is a host and client socket on both sides. The InterAct interface shall be configured as a "Server" which listens tothe incoming connection on a configurable port and shall be configured as a "Client", which connects to the OSSI Server application on a configurable port. All the data will be sent via these dual TCP/IP sockets. The InterAct "Server" socket will only receive data. The InterAct "Client" socket will only send data.

In the diagram above, OSSI connects it's "client" to the InterAct "server" or "host" on socket1. All data, including heartbeat, is sent from OSSI to InterAct over socket1. Likewise, InterAct connects it's "client" to the OSSI "server" or "host" on socket2. All data, including heartbeat, is sent from InterAct to OSSI on socket2. For clarification, InterAct will not send any data on socket1, nor will it receive any data on socket2.

API = 3.1

1.2.2   HEARTBEAT

The OSSI CAD will be configured to send a heartbeat package when they have not received a heartbeat from InterAct CAD.

The InterAct CAD system will send an automatic alert to the Attendant Window of currently logged in users notifying them that a heartbeat was not received within a specified time. The InterAct CAD system will attempt to reconnect until a connection is re-established. Once the connection is re-established an automatic alert will be sent to the Attendant Window of currently logged in users notifying them the connection has been made.   The InterAct CAD system will only automatically alert after at least one heartbeat has been received by OSSI.

The interval for detecting that a Heartbeat was not received will be configured by

InterAct CAD

+++InterAct will not send Heartbeat messages. It will only send Heartbeat Acks.

API = 6.1, 6.2

1.3 CAD TO CAD FUNCTIONALITY

1.3.1 FUNCTIONAL OVERVIEW

The primary object of the CAD to CAD interface is to transfer or receive incident data between two CAD systems. Once an incident is initially transferred from one CAD system to another, the incidents are the linked between the two CAD systems. This section describes the functionality that will be supported.

1.3.2 INCIDENT SHARING

1.3.2.1 SENDING NEW INCIDENTS
API = 6.3, 6.4

1.3.2.1.1 To initiate a transfer of a new incident to be sent to InterAct CAD, a dispatcher will manually request a transfer of the incident via the OSSI CAD command line or via a button on the incident display screen.

1.3.2.1.2 Below are the incident data elements that should be sent to InterAct CAD if available.

• CAD Master Incident Number	Incident Number
• ProQA Determinant	Event Code
• Problem Nature	Event Code
• Incident Type	TBD
• Priority Number	Event Code Priority
• Address	Address
• House Number	House Number

Software Requirements Document

• House Number Suffix	House Number Suffix
• Prefix Directional	Prefix Directional
• Street Type	Street Type
• Post Directional	Post Directional
• Apartment	Apartment
• Building	Building
• City	Community
• Location Name	Location Information
• Cross Street	Cross Street
• Caller Name	Caller Name
• Call Back phone	Phone Number
• Response Date (record creation)	Created Time
• Current Date & Time	Send Time
• Incident Comments (most recent first, to oldest last)	Remarks

1.3.2.1.3 InterAct CAD will respond with an acknowledgement indicating the incident was received within a specified waiting period (10 second wait period with 3 retries), the interface will send a "Failed to Send Incident" notification message via the CAD Messaging system to a predefined CAD notification group. In addition, all subsequent incident updates for unacknowledged incidents from the OSSI CAD system will be ignored due to the lack of a InterAct CAD incident number/reference.

1.3.2.1.4 The "Problem Nature" sent from OSSI CAD must match the existing "Event Codes" in InterAct CAD. If an incident is transferred from OSSI CAD and the Problem Nature doesn't match an existing Event Code in InterAct CAD, the incident will be created using a default Event Code. InterAct CAD will not be responsible for any mapping between OSSI CAD Problem Nature codes and InterAct CAD Event Codes.

1.3.2.1.5 The InterAct CAD system will always create the incident using a default ESN. This will ensure the incident is routed to the appropriate users.

1.3.2.1.6 The InterAct CAD system will support the transfer of the information obtained using Priority Dispatch software as long as that data is transferred from OSSI CAD in the defined fields outlined in 1.3.2.1.2

1.3.2.1.7 OSSI is responsible for programming an additional field in the CADtoCAD interface with the xml specification tag(<ProQADeterminant></ProQADeterminant>. This will pass the full PROQA determinant to InterACT CAD. IA will attempt to validate that determinant as an Event Code, if it does not exist, then IA will default to the OSSI Problem Nature that has been passed. If the Problem Nature and ProQA Determinant are not found in InterACT CAD, InterACTCAD will validate using the default Event code configured. IA will not translate the PROQA determinant sent, but will attempt the validation as stated above.

1.3.2.2 INCIDENT UPDATES
API = 6.5

1.3.2.2.1 If an incident has been transferred to the InterAct CAD system, then the subsequent updates of specific fields on the incident from either OSSI or InterAct CAD will trigger an incident update message to the incident.

1.3.2.2.2 The data elements that can be configured to trigger an incident update are:

- Problem Nature
- Address
- City
- Apartment
- Location Name
- Priority
- Comments
- Building
- Call Back Phone
- Caller Name
- Cross Street

1.3.2.2.3 If the Problem Nature is changed in the InterAct CAD on an open incident an update will be sent to OSSI CAD. It is OSSI's responsibility to determine how to handle any mismatches. (Please see 1.3.2.1.4 as to how InterAct will handle any mismatches when receiving data from OSSI CAD.

1.3.2.3 INCIDENT CANCELLATION
API = 6.7

1.3.2.3.1 If an incident that has been sent from OSSI CAD to the InterAct CAD system is cancelled within OSSI CAD, the cancellation event will trigger the sending of an incident cancellation request to the InterACT CAD system. The cancellation request will include the reason and disposition.

1.3.2.3.2 The InterAct CAD system will add the cancellation request information to the narrative section of the incident. InterAct CAD will not automatically close the incident.

1.3.2.3.3 If an incident that has been sent from OSSI CAD to the InterAct CAD system is cancelled within InterACT CAD, the cancellation event will trigger the sending of an incident cancellation request to the OSSI CAD system.

1.3.2.4 INCIDENT COMPLETION (CALL CLOSING)
API = 6.6

1.3.2.4.1 When a CAD Incident is closed in OSSI, the interface shall generate and send a Call Closed message to the InterAct CAD system. The message will provide the close reason and disposition, if available.

1.3.2.4.2 The InterACT CAD system will add the incident completion information to the narrative section of the incident. InterAct CAD will not automatically close the incident.

1.3.2.4.3 When a CAD Incident is closed in InterAct CAD, the closed event will trigger the sending of an incident completion request to the OSSI CAD system.

1.4   CONTACT INFORMATION

Gloria Street
Product Manager
760-265-1719
gloria.street@interact911.com

#G.1.

1.1.4 CUSTOMER APPROVAL & SIGNOFF

INTERACT:

Name _____

Title _____

Signature _____

Date _____

CITY OF DUNWOODY:

Name _____Warren Hutmacher_____

Title _____City Mangger_____

Signature _____W A.H_____

Date _____6/18/13_____

CHATTAHOUCHEE RIVER 911 AUTHORITY (ChatComm):

Name _____

Title _____

Signature _____

Date _____

DEKLAB COUNTY 911:

Name _____

Title _____

Signature _____

Date _____