I. Event Overview

The third Industry Collaboration Event (ICE 3) was held the week of November 28\textsuperscript{th} in Bryan, Texas at the Brazos Valley Council of Government building. The theme of this event was NG9-1-1(i3) location related information. Approximately thirty-five people were in attendance and included both vendors and other special invited guests (NENA, ICE SC members etc). Texas A&M University IT staff members were also on hand to support the network facilities for the event.

II. Participants

Seven vendors officially participated in ICE 3, they were:

- Dash CS ESRP/ECRF/LIS
- Bullberry ECRF/LVF
- DDTI ECRF/LVF
- Geocomm ECRF/LVF
- Avaya ESRP
- Andrew LIS
- Red Sky LIS

They tested functions relating to the LIS, the ESRP and the ECRF/LVF (LoST).

Although not actual participants, several recording vendors asked to be allowed to record ICE 3 SIP sessions passively. Some geo-shapes utilized at ICE 3 were much more complex than those at previous ICE events and all geo-shapes are critically important for retrieving logged events and media. The ICE 3 Planning Committee allowed this passive participation, and acknowledged that having the sessions recorded might be useful in tracking down a call processing issue, should one occur. The following vendors recorded ICE 3 SIP sessions on site:

- DSS
- Eventide
- HigherGround
- NICE
- Revcord
- Stancil

Solacom also attended the event, providing a soft client to take calls. They primarily focused on programmatic interaction with the recording vendors. They did not perform any event related interoperability testing.

III. Testing Specifics

A large amount of tests were constructed and represented in two separate overall scenarios. Each scenario required a different permutation of vendors in each role. For example, Scenario 1(a) may have required the following components:
- LIS
- ESRP
- ECRF

The first permutation would be: Andrew LIS, Dash CS ESRP and the Bullberry ECRF. Permutation two would be Red Sky LIS, Avaya ESRP and the Geocomm ECRF and so on.

In scenario one there were a total of ten sub-tests that incorporated basic LIS/ECRF and ESRP operations (no failure or unusual circumstances). Scenario two had a total of ten sub-tests as well. This resulted in a total of four-hundred and fifty-eight (458) separate tests.

Each scenario contained either a polygon representing the caller that was measured against a routing polygon or a point that lands within an oddly formed routing polygon (i.e. an ellipse, inlet, peninsula etc.). Following are example diagrams of both sets of shapes.

A. Example Shapes Representing the Caller

Point

Circle

Arc Band

Polygon

Ellipse

Simple

Hoop

Wedge

Convex

Concave
B. Example Service Boundary Polygons Representing the PSAP’s

Following are the details of the tests as well as the expected behaviors.

C. Scenario One Tests

<table>
<thead>
<tr>
<th>Step #</th>
<th>Test Scenario Description</th>
<th>Expected Behavior</th>
</tr>
</thead>
</table>
| 1-a    | Calling device requests location from LIS (civic location)                                | For location 3A ECRF returns PSAP=B, Brenham ECD URI  
|        |                                                                                           | Brenham PSAP receives call  
|        |                                                                                           | For location 3A ECRF returns:  
|        |                                                                                           | for police Washington Sheriff URI,  
|        |                                                                                           | for fire Washington County rural fire URI,  
|        |                                                                                           | for ambulance Washington county ambulance URI |
| 1-b    | Calling device requests location from LIS (2d geodetic point)                             | For location 2C ECRF returns PSAP=B, Rockdale PD URI  
|        |                                                                                           | Brenham PSAP receives call |
| 1-c-i  | Calling device requests location from LIS (geodetic circle)                               | For location 2M ECRF returns PSAP=A, Cameron PD URI  
|        |                                                                                           | Brenham PSAP receives call |
| 1-c-ii | Calling device requests location from LIS (geodetic circle)                               | For location 2Y ECRF returns PSAP=A, Cameron PD URI  
|        |                                                                                           | Brenham PSAP receives call |
D. Scenario Two Tests

<table>
<thead>
<tr>
<th>Step #</th>
<th>Test</th>
<th>Expected Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-a</td>
<td>Calling device requests location from LIS (geodetic point)</td>
<td>For location 2C ECRF returns PSAP=B, Leon County SD URI</td>
</tr>
<tr>
<td>2-b</td>
<td>Calling device requests location from LIS (2d geodetic point)</td>
<td>For location 2I ECRF returns PSAP=A, Burleson PD URI</td>
</tr>
<tr>
<td>2-c-i</td>
<td>Calling device requests location from LIS (geodetic circle)</td>
<td>For location 2N ECRF returns PSAP=A, Robertson County SD URI</td>
</tr>
<tr>
<td>2-c-ii</td>
<td>Calling device requests location from LIS (geodetic circle)</td>
<td>For location 2Z ECRF returns PSAP=A, Brazos County ECD URI</td>
</tr>
<tr>
<td>2-c-iii</td>
<td>Calling device requests location from LIS (geodetic circle)</td>
<td>For location 2GG ECRF returns PSAP=B, Brenham ECD URI</td>
</tr>
</tbody>
</table>
### 2-d-i
Calling device requests location from LIS (geodetic arcband)  
For location 2LL ECRF returns PSAP=A, Robertson County SD URI

### 2.d.ii
Calling device requests location from LIS (geodetic arcband)  
For location 4B1 ECRF returns PSAP=B, Leon County SD URI

### 2.d.iii
Calling device requests location from LIS (geodetic arcband)  
For location 2OO ECRF returns PSAP=A, Brazos County ECD URI

### 2-e
Calling device requests location from LIS (geodetic ellipse)  
For location 2QQ ECRF returns PSAP=A, Madison County SD URI

### 2-f
Calling device requests location from LIS (geodetic polygon)  
For location 2SS ECRF returns PSAP=A, Brazos County ECD URI

### IV. Final Results

There were seventy-six planned bilateral tests in which each vendor confirmed that they can “speak” to another vendor’s product. All seventy-six tests were completed either before or within the first few hours of the first day of the event.

As previously mentioned, there were two scenarios set up for the event encompassing four-hundred and fifty-eight (458) test iterations. Seventy-two percent (72%) of those were completed. Almost all of the vendors present were able to pass the tests.

All of the official scenario testing was completed by Thursday and some ad hoc “unofficial” tests were completed on Friday (undocumented). In addition to me, James Winterbottom (Andrew) and Jason Horning (Bullberry) oversaw the event planning, tests and overall coordination of the vendors.

### V. Upcoming ICE Events

The next ICE will be during the spring of 2011 and it will require the participation of recording vendors (ICE 8) and any functional element vendor where i3 standards state logging/recording is required.

During the fall timeframe of 2011 is when ICE 4 is planned. ICE 4 will focus on the LoST call routing hierarchy.