Overview of the LAN-TEL/Tellus Project
For the Boston Camera Integration
Phase IV-a, Milestone 4

Summary Review of Phase IV-a (all milestones)

Tellus (formerly FATPOT Technologies) has provided capabilities within the Tellus.Hub (formerly fusionPLATFORM) to set up automated positioning of relevant cameras (pan, tilt, zoom, or PTZ) using the capabilities of a Flir camera API that was developed specifically for this purpose. This will enable the customer to: (a) instantly view the area of the incident using existing Flir viewing capabilities, and/or (b) review recorded footage at a later time of the incident area using Flir bookmarking and reviewing capabilities.

Summary Review of Phase IV-a, Milestone 4

This report describes efforts leading to and for Milestone 4 of Phase IV-a of the Statement of Work (SOW) between Tellus (formerly FATPOT Technologies) and LAN-TEL. Milestone 4 for Phase IVb states:

- **Deliverable:** Provided the customer with configuration training for camera control integration relevant to Tellus' fusionPLATFORM environment.

The purpose of this and other supporting deliverables is to *"provide the customer with camera configuration documentation and remote training … to empower the customer to set up and configure all VMS servers in the Boston Region."* (Section 2.1.8 of the SOW).

It is not to be understood that Tellus is equating the milestone payment amount with the actual training that has occurred. Instead, the training marked a point in the project where the cumulative software capabilities and professional services that have been delivered to that point are now functionally suitable for deployment. The training was essentially a formality and the last box to be checked to close out the Phase IV-a portion of the agreement as described in the SOW.

Tellus agreed in the SOW to allow this amount to be withheld until this point as security assurance for the customer. The milestone should be viewed as a catch-up payment for consideration of all work and deliverables provided in Phase IV-a.

Report of Events and Activities

Training of the customer was not so much of an event as it was a process. It was proceeded with the *"professional services to set up the configuration of at least one Flir VMS server in order to prove capabilities of the system."* (Section 2.1.7 of the SOW). In a bulletized summary, this included:

- Design and requirement gathering sessions were had between Tellus, the customer and Flir to identify useful capabilities that would bring value to the Boston UASI area.
- Upgrades of CADfusion (aka, Tellus.Hub), the core software platform that aggregates all the 9-1-1 incident data for the UASI cities and enables intelligent interoperability features. These upgrades solved problems related to this project as exposed in a gap analysis review. The primary gap was a geocoding feature that enriched 9-1-1 incident data with more lat/long coordinates.
- Engagement with Flir engineering to develop a Tellus compatible API so the Tellus system could successfully exchange data with the Flir Camera systems. This resulted in a developed API that enables a repeatable implementation and connectivity for each city's Flir Latitude VMS Camera Server.
- Recursive testing between Tellus and Flir until all designed features and capabilities were ready for production.
- Networking arrangements between Tellus.Hub and the initial Latitude VMS implementation (Brookline PD). This work included tasks coordinated with InterIsle, Brookline IT and Tellus.
- Installation of the new Flir adapter on the Brookline Latitude VMS server and configuration of the system in general for communication with Tellus.HUB, as well as zone configurations for each camera attached to the Latitude VMS server.
- Configuration of Tellus.Hub that included connectivity with the now enabled Brookline Latitude VMS Server. It also included a standardization of 9-1-1 incident values so they can be consumed and processed by the new Flir adapter.
- Comprehensive testing in the live Brookline environment. (Details are below in the testing section.)
- Creation of a comprehensive administrative manual. This manual was a considerable joint effort between Flir and Tellus. This administrative manual includes all steps necessary in both Flir's Latitude VMS Server and the Tellus.Hub in order to install the Flir adapter, engineer network rules, and configure both systems.
- A final work session with the customer (the "training") culminating in a final review of all work done, stepping through all configurations, and reviewing the documentation as a source for reference.

Following all steps above, particularly the last one, the customer provided acceptance of the final milestone of Phase IV-a as shown in the email below:

Subject RE: Follow up from today's testing and training with the Flir Cameras   1/18/2019, 6:25 AM

To Roger Salisbury ⭐

Cc Eric Johnson ⭐

Tested and confirmed.

Scott

From: Roger Salisbury [mailto:rsalisbury@fatpot.com]
Sent: Wednesday, January 16, 2019 12:05 PM
To: Scott Wilder <swilder@brooklinema.gcv>
Cc: Eric Johnson <ejohnson@Lan-Tel.com>
Subject: Follow up from today's testing and training with the Flir Cameras

Scott,

As discussed in this morning's testing/training work session, please confirm that the two milestones highlighted below were met to your satisfaction.

Thanks,
Roger

		Phase IVa – Incident Based Camera Controls		
Nbr	**Milestone**	**Deliverables Included**	**Acceptance Criteria**	**Amt Due**
1	3rd Party Invoicing	Engagement of FLIR technical services	A copy of either an invoice from or proof of payment to FLIR will be provided for project reimbursement.	$20,000
2	Camera Control Design	Design documentation for camera management and configuration.	The design documentation provided by FATPOT for camera management and configuration is reviewed and signed off by the customer as described in section 2.1.5.	$34,600
3	Acceptance of Incident Based Camera Controls	Incident Based Camera Control Capabilities.	Incident based camera control capabilities are deployed to the Boston fusionPLATFORM hub and the minimum number of VMS servers have been configured and are operational as described in section 2.1.7.	$34,600
4	Training	Training of up to 4 hours	FATPOT has provided the customer with configuration training for camera control integration relevant to the FATPOT fusionPLATFORM as described in section 2.1.8.	$34,641
			TOTAL:	**$123,841**

Roger Salisbury
Customer Champion
Sales & Marketing

Comprehensive Testing

The customer provided a list of test addresses deemed interesting and useful for the purpose of testing the response of city cameras if in fact a 9-1-1 incident was at said location. These addresses were associated with a camera of interest so that it could be observed when a test incident was created in Tellus.Hub at each location.

The table below shows this list of addresses, the specific latitude and longitude used in the 9-1-1 incident, and a note of the test results. The latitude-longitude coordinates are the primary data point that the Flir adapter operates from in order to activate the actions of cameras. The testing techniques included:

1. Setting a test 9-1-1 incident in Tellus.Hub for each location below.
2. Watching the location of the incident in GIS map module of the Tellus Portal client application to confirm it was set at the intended location.
3. Observing the GIS map in the Latitude VMS Console application to confirm that the camera system set an alarm at the same location as the Tellus system.
4. Watching the live video feed for the camera of interest in the Latitude VMS Console application and watching its activity at the time the incident data was set in Tellus.Hub.
5. Confirming that the view of the camera was indeed in the expected direction to best show and capture the view of activity that would be coming from the test location.
6. Review the video history by searching for a bookmark based on key values from the test 9-1-1 incident.

The Latitude VMS system worked flawlessly and as designed in 100% of all cases that were tested.

Camera Location	Address of Test Incident	Lat	Long	Comments/results
Beacon & Washington Street	721 Washington St	42.3404280	-71.1375964	Successful testing. All applicable cameras turned to direction coordinates.
Beacon & Washington Street	690 Washington Street	42.3389840	-71.1345510	Successful testing. All applicable cameras turned to direction coordinates.
Beacon & Washington Street	1651 Beacon Street	42.3390600	-71.1359420	Successful testing. All applicable cameras turned to direction coordinates.
Beacon & Washington Street	1680 Beacon Street	42.3392030	-71.1379480	Successful testing. All applicable cameras turned to direction coordinates.
Beacon & Carlton	1024 Beacon Street	42.3463340	-71.1079270	Successful testing. All applicable cameras turned to direction coordinates.
Beacon & Carlton	1080 Beacon Street	42.3456230	-71.1107550	Successful testing. All applicable cameras turned to direction coordinates.
Boylston & Chestnut Hill	709 Boylston Street	42.3269680	-71.1424410	Successful testing. All applicable cameras turned to direction coordinates.
Boylston & Chestnut Hill	774 Boylston Street	42.3263340	-71.1451630	Successful testing. All applicable cameras turned to direction coordinates.
Boylston & Chestnut Hill	46 Channing Road	42.3271670	-71.1426430	Successful testing. All applicable cameras turned to direction coordinates.
Boylston & Chestnut Hill	801 Boylston Street	72.3266570	-71.1465460	Not tested. Customer didn't feel the need to continue testing.
Boylston & High Street	22 High Street	42.3307740	-71.1174180	Not tested. Customer didn't feel the need to continue testing.
Boylston & High Street	195 Washington Street	42.3322820	-71.1179980	Not tested. Customer didn't feel the need to continue testing.

Training and Documentation

The culmination of all these events resulted in a review of all deliverables that had taken place to provide this capability to the Boston UASI area in a meeting on Wednesday, January 16, 2019. It included a hands-on review of all required settings in the Tellus.Hub system, settings on the Brookline City's Latitude VMS system, as well as the comprehensive administrative manual that documents all steps required to implement this feature in additional cities. This administrative manual titled **"FLIR-FATPOT Latitude VMS Integration User Manual"** is provided as a supplement to this milestone report.

The activities and deliverables provided by LAN-TEL and Tellus complete all contracted requirements for Phase IV-a of the SOW. In addition to this, LAN-TEL and Tellus stand ready to assist the customer from a support capacity for future Tellus-to-Flir implementations in additional cities.