New York City Sub-Regional ITS

Architecture Working Committee

Meeting Minutes – April 20, 2006

A meeting of the Sub-Regional Architecture Working Committee was held at 10:00 AM on April 20, 2006. The meeting was held at NYSDOT Region 11's offices at 47-40 21st Street, Long Island City. A copy of the agenda and the attendance sheet are attached at the end of these minutes.

Welcome
Mr. Lai welcomed everyone to the meeting.

Introductions and Announcements
Went around the room so everyone can introduce themselves.

There was a comment on FHWA's receipt and acceptance of the NYC Sub Regional architecture. Mr. O'Connor responded that he received the architecture, and the document was considered (by FHWA) to have met the requirements set forth in 23 CFR 940. Mr. O'Connor further indicated that the NYC Sub Regional architecture is considered a 'living' document; hence the reason the architecture falls short of actual "approval".

Mr. Lai stated that the purpose of the meeting is to continue the consensus approach for the New York City Sub-Regional ITS Architecture, and to discuss the next steps for updating and maintaining the architecture.

Mr. O'Connor asked whether the rest of the MTA family needed to be present (e.g., LIRR, MNR, NYCT, LI Bus etc.). Mr. Roper answered that any pertinent information will be collected by MTA-HQ and any decision-making that involves the other agencies will be coordinated by MTA-HQ.

Mr. O'Connor re-iterated that the architecture is a living document which represents, in part, consensus-driven strategies among the partner agencies that will lead to the coordinated implementation of ITS projects.

Mr. O'Connor previously sent out a listing of breakout sessions to be held at at ITS America in Philadelphia (May) related to Rule 940, ITS Architectures (i.e. how to use), ITS Standards, Systems Engineering etc.

Dr. Jaffe/Mr. O'Connor mentioned that a 2-day/3-day "Using your ITS Architecture" workshop was being developed by FHWA for later this year. Four locations will be selected & held by 10/01/06. The FHWA Northeast region location will be in Philadelphia tentatively scheduled on September 19th & 20th. FHWA is also updating guidance documents on the use and maintenance of ITS Architectures for distribution by mid-Summer/early Fall, 2006. Release of a Systems Engineering Guidance document is expected by the Fall, 2006.

Mr. O'Connor added that the concept of 'how to use' ITS architectures is still an evolving process within both USDOT & state DOT's. For this reason, the past twelve months was considered to be largely a transition year regarding its use. It is expected that a far greater level of use will be employed among each of the agencies as we proceed.

Mr. Lai added that we should discuss (maybe not resolve) issues from the last meeting that have been put aside.

Mr. O'Connor commented on the integration of ITS architectures into the planning process, specifically NYMTC's. He stressed the ultimate significance of integrating architectures into the planning process in a well-defined manner, notwithstanding the many complexities. Mr. O'Connor also referred to the current NYSDOT Project Development process that is being addressed by ConSysTec to address systems engineering requirements, ITS Standards, and MPO/Architecture issues. Completion of this process will be instrumental for the NYCSRA partner agencies.

A list of FHWA activities and notes are attached.

Using the ITS Architecture
Mr. Chan indicated that the Draft Use Plan was distributed last year for comments, but no comments were ever received, and the Use Plan was never formally accepted. Mr. Chan then passed around a copy of the Use Plan.

Mr. Chan is to e-mail the URL for the Use Plan to the group to review the Report on its technical content. The group agreed on a 60-day comment period. If there are no comments are received, ConSysTec is to submit a formal letter to accept the Use Plan. Mr. O'Connor restated the significance on reaching closure on this issue.

Mr. Vollaro asked whether the Use Plan needs to be updated under the Maintenance Plan. Mr. Chan checked the Maintenance Plan and confirmed that the Use Plan is a baseline document, and should be updated using the approved maintenance procedures.

Mr. Insignares reviewed the organization of the Use Plan. A key to the Use Plan is a diagram showing Project Programming vs. Project Design. A question was asked where FHWA was in the process, resulting in a brief discussion.

Mr. O'Connor asked the agencies how the architecture was being used. One response was by Mr. Roper who confirmed use of the architecture by the MTA, specifically the transit agencies. It is integrated into existing processes because it is a requirement for annual certification. A project architecture should be in the project file and available for FTA auditors during the Triennial review process. Mr. O'Connor asked whether such use of the architecture on behalf of the MTA could be shared for the benefit of the others. The MTA was not in a position to distribute it at this time.

Dr. Jaffe suggested that ConSysTec could interview the agencies and create a Use Case document to detail the use of the ITS architecture by the different agencies, presented in a common format. The group agreed that it may be a good idea and worth doing.

Web Site Security
Mr. Chan indicated that the web site area hosting the NYCSRA still requires a user name and password. However, there is becoming a need for the agency's consultants to access the architecture so they can collect the information required to show compliance with the

architecture for FHWA funding. Mr. O'Connor indicated that if consultants are unable to refer to the architecture for compliance purposes, this will create a major problem which we'll need to resolve ASAP.

Mr. Vollaro said that there are still topics of concern. The architecture does currently document key systems, even if it is at a high level. MTA's security groups have reviewed the current version of the NYCSRA and has no objections to it, but the concern is how to review the future updates. In summary, can the architecture information, and future updates to the architecture, be used to do harm? An MOU and/or practice or policy is probably needed on the distribution of ITS architecture information.

Mr. Huttner pointed out that also in the future we may be adding security-related market packages, and making certain information public will make it difficult for get emergency transportation agencies to be involved.

Mr. Berlie also pointed out that within the agencies, it is becoming difficult to distinguish what systems are for ITS only, and what systems are for security purposes only. For example, CCTV cameras may be used for ITS/transportation or for security only.

Mr. Roper asked if ConSysTec could provide a menu of options and cost for implementing reasonable security.

Dr. Jaffe summarized some possible options:

- Username and Password to an individual with a deed to change the password periodically. This provides traceability of when which file was accessed and who accessed it. It can also provide the ability to limit which market package diagrams can be accessed based on the username.
- Provide the architecture only on CD ROM and not on a web site.

Mr. Vollaro distributed a draft proposal on a way security might be handled (attached).

Mr. O'Connor asked if there is final consensus on sharing information with consultants for PSEA development? The group generally agreed with sharing the current version of the NYCSRA with consultants, as necessary.

Mr. Chan said that ConSysTec will provide an approach for handling security at the next meeting. The approach will consider only updates to the architecture and not the current version of the architecture. The approach will include:

- How and who determines what (updates) is a security issue?
- If it is a security issue, how do we limit access?

As for the current version of the NYCSRA, Mr. Roper believes that consultants should go through their (agency) project manager to get the information needed for the PSEA. It is the responsibility of the project manager (agency representative) to properly provide his consultants the project-specific information from the NYCSRA.

Mr. Vollaro will check with the MTA security groups one last time on if there are any objections to making the current version of the NYCSRA available to the public and/or providing consultants can have access.

NYCSRA Update
Currently, the NYCSRA is using Version 4.0 of the National ITS Architecture (NITSA). Version 5.1 is the current version of the NITSA, and it contains emergency disaster and recovery market package diagrams. Work has started on Version 6.0. Version 6.0 is projected to be completed by TRB in January 2007. ConSysTec is currently in discussion with NYSDOT to develop and update regional ITS architectures for each of the NYSDOT regions EXCEPT for Region 11 (New York City) because of its unique situation.

Maintenance
Mr. Chan brought up the topic of maintaining the architecture. Mr. Lai asked each of the key stakeholders to begin collecting proposed changes to the NYCSRA from their member agencies, and send them to Mr. Lai. Mr. Lai will then forward the change requests to ConSysTec, who will then analyze the requests and update the comments database. ConSysTec will draft an e-mail for Mr. Lai to send to the stakeholders. Mr. Muriello will be the point of contact for PANYNJ, and Mr. Roper will be the point of contact for MTA.

Systems Engineering Analysis
ConSysTec mentioned that it is working with NYSDOT to develop guidelines to perform the systems engineering analysis for NYSDOT to satisfy the Federal Rule 940/FTA Policy requirements. ConSysTec is to provide a sample of the Project Systems Engineering Analysis to Mr. Tipaldo and Mr. Athanilos. Mr. Talas suggested that a workshop be held to explain how to develop one. Mr. Roper has an "implementation guideline" that is being used at MTA.

Architecture Training
ConSysTec was asked to provide training on the Basics of Architecture (101). The members that have actively participated in the development of the NYCSRA are familiar with ITS architectures, but the agency project managers that have not participated and the agencies' consultants need the training.

Mr. Roper also asked that ConSysTec provide an update on the state of ITS Standards to the group. Topics should include a discussion on regional standards and TCIP. Mr. O'Connor provided comment on the ITS Standards website and related committees.

Transportation Response Group
Mr. Chan mentioned the existence of the Transportation Response Group (TRG). The topic was brought up because ConSysTec would like to approach the TRG for assistance with the Emergency Disaster and Recovery market packages when updating the NYCSRA to Version 5.1 (or higher), since the TRG has the expertise. The group liked the existence of the TRG and agreed it was a good idea to approach them.

Mr. Roper asked if MTA Police was represented because their name was not included on the slide. Mr. Chan would investigate and confirm.

ITS Architecture Workshop
ConSysTec mentioned that there was a "Using Regional ITS Architectures" workshop on February 28-March 1, 2006 in Orlando, FL, that was sponsored by the RITE Forum of

ITS America. Due to time constraints, ConSysTec did not review the slides that summarized the discussions, but ConSysTec will include the slides with the minutes.

Mr. Chan also announced that ConSysTec has updated its website and has created an ITS Architecture Forum where agencies can share and exchange information on ITS Architectures.

Closing Remarks

The group agreed to meet again in 2 months, then quarterly for the remainder of the year. The next meeting is tentatively scheduled for June 22, 2006 at 10 AM.

The meeting adjourned at 12:30 PM.

Action Items:

- ConSysTec – Provide the URL for the Use Plan to stakeholders for review.
- Stakeholders - Review the Use Plan, which is currently on the web site, and provide any (technical) comments within 60 days (June 20).
- Stakeholders – Review the NYCSRA and submit any change requests to Mr. Lai.
- Paul Vollaro – Send an electronic copy of a proposed security policy.
- MTA – Review making the web site public, hopefully within 30 days.
- ConSysTec – Provide some discussion points for a security policy for future updates to the NYCSRA.
- ConSysTec – Draft an e-mail for Mr. Lai to distribute, requesting stakeholders to submit change request forms.
- ConSysTec - Provide a sample of the Project Systems Engineering Analysis performed for NYSDOT to the group.
- ConSysTec – Provide an update on the current status of ITS Standards.
- ConSysTec – Verify if MTA Police is participating in the Transportation Response Group (TRG).
- ConSysTec – Provide slides summarizing the "Using Regional ITS Architectures" workshop.

We believe that these minutes are an accurate depiction of the discussions and agreements at the meeting. If there are any additional comments, additions or clarifications needed, please contact or e-mail to Patrick Chan (718-767-5120, patrick.chan@consystec.com).

Meeting Participants

Name	Affiliation	Phone
Fred Lai	NYSDOT R.11	718-482-4745
Arthur O'Connor	USDOT/FHWA	212-668-2206
Mohammad Talas	NYCDOT	718-433-3390
John Tipaldo	NYCDOT	718-433-3375
Ernest Athanailos	NYCDOT	718-786-8853
Diane Daly	MTA-HQ	212-878-7458
Paul Vollaro	MTA-HQ	212-878-1285
Jon Roper	MTA-HQ	212-878-7007
Sal Mamone	NYMTC	718-472-3222
Abiyu Berlie	MTA B&T	646-252-7102
Ira Huttner	PANYNJ	212-435-3121
Tom Batz	TRANSCOM	201-963-4033
Karen Johnson	NYCDCP	212-442-4717
Dr. Robert S. Jaffe	ConSysTec	914-248-8466
Manny Insignares	ConSysTec	212-687-7911
Patrick Chan	ConSysTec	718-767-5120

INTERAGENCY ITS SUB-REGIONAL ARCHITECTURE COMMITTEE

Date: April 20, 2006 **Time:**   10:00 AM to 12:30 PM
Location: NYSDOT - REGION 11
47-40 21st Street, LIC, N.Y. Room 820

AGENDA

1. Introductions and Announcements
2. Final Draft Use Plan
3. Website Security of Documents
4. Next Architecture Steps for Consideration
   o Update to Version 5.1 of the National ITS Architecture
   o Support Architecture Maintenance Activities
   o Project Systems Engineering Analyses
   o Providing training on Using the ITS Architecture
5. Other Topics

FHWA Activities

1. ITS 'Architecture Guidance' document: A final document on 'How To Use Architectures In The Planning Process' is expected in August, 2006.

2. An 'ITS Architecture Process Review Improvement Guide' is expected in June, 2006.

3. A 'Systems Engineering Guidance Document' is expected in August, 2006.

4. A 'Systems Engineering Process Improvement Review Guide' is expected in June, 2006.

5. 'Systems Engineering Process Reviews' are on-going...NYC can be offered upon request.

6. A 'Systems Engineering Peer Exchange' workshop is planned for late 2006 at a field site to be determined. The objective behind the workshop is to bring ITS deployers from around the nation to exchange ideas on challenges and best practices. The workshop is by invitation and will target those agencies with a great deal of experience in deploying ITS.

7. ITS Standards website (as it came up during our meeting): http://www.standards.its.dot.gov/

8. ITE ITS training in NY is scheduled in Albany on 6/26-28 (i.e. Overview, DMS, IEEE 1512). Contact Aliyah Horton @ 202.289.0222 (X137) or ahorton@ite.org.

9. T3 Training: 5/17 @ 1:00PM - 'Using Standards to Make "Smart" Choices in AFC projects'. More general info @ www.ntotalks.com/web casts. Register for the 5/17 seminar @ http://talkingopsandfreight.webex.com or Zia Burleigh @ 202.366.1896.

MTA's Preliminary Draft of a
New York City Sub-Regional Architecture Security Sensitive Information Policy

Goal

Develop a regional interagency protocol for ensuring that security-sensitive agency information is protected from release to the public through the New York City Sub-Regional Architecture initiative, while enabling federally mandated regional coordination and achieving the federal public information requirements of the project.

Background

Agencies that receive federal funds for Intelligent Transportation Systems (ITS) projects are required to develop an ITS architecture: a framework for ensuring technical coordination and integration of ITS projects across agencies and jurisdictions in a given region. In the New York metropolitan region, the New York City Sub-Regional Architecture (NYCSRA), a joint initiative of four partner agencies (the MTA, PANYNJ, NYCDOT, and NYSDOT), fulfills this requirement. The NYCSRA describes the current status and future plans for how and what information is exchanged between these and other regional transportation entities. It also sets forth what ITS initiatives are planned for the short, medium, and long term, consistent with the statewide and metropolitan transportation planning process.

The four NYCSRA partner agencies currently share information regarding institutional agreements and information flows via a password-protected web site, which is maintained and updated by the NYSDOT-retained Consultant, presently Consensus Systems Technologies, or ConSysTec. While the information currently stored on the web site may not be security-sensitive, future agency information shared through this ongoing project could be sensitive. Further, web site security cannot be guaranteed; measures such as password protection are vulnerable to defeat. And finally, because the NYCSRA is a federally-funded effort, the information currently contained on the web site is intended to be made available to the public, now that the architecture has been formally submitted to the federal government.

Further, the partner agencies and Consultant also may share information and documents via e-mail, which, if unencrypted, similarly makes its contents vulnerable to exposure.

This raises the issue of how to (1) ensure that security-sensitive agency information is excluded from the NYCSRA web site, while still achieving the public information requirements of the project, and (2) adequately protect (or use an alternative to) e-mail transmissions among the partner agencies and Consultant. The following is a proposed regional interagency protocol for this purpose.

The guiding principles of this protocol are that

1. No information may be placed on the NYCSRA web site unless it has been specifically approved for release to the public by each affected agency. This enables each agency to independently evaluate the sensitivity of information according to its own internal policies, regulations, and other requirements, and to protect security-sensitive information from release.

2. All e-mail transmissions containing agency information that are exchanged via e-mail shall be encrypted using a method agreed upon by the partner agencies, unless the contents have been approved for public consumption by each affected agency.

Proposed Regional Protocol on Security-Sensitive NYCSRA Information

Definitions
As a working definition for the purposes of this document, "security sensitive information" refers to proprietary data or information that, if subject to unauthorized access, modification, loss or misuse could adversely affect the security of agency employees and facilities, the public, and/or homeland security. Each agency may have its own specific definition and/or criteria.

"Information" is used broadly to mean draft and/or final paper and/or electronic materials that include or reflect agency information of any kind. Materials may include but are not limited to: plans, reports, inventories, diagrams, agreements, market packages, and meeting minutes.

"Release" means to make information publicly available or vulnerable to unauthorized viewing. Release can entail adding information to the NYCSRA, posting it on the Internet, e-mailing it without encryption, or not sending or storing hard copies in a secure fashion.

"Owner" refers to each and every agency described in or referenced by the information. Information may have two or more owners (e.g., description of an information flow between two entities, or of a data interface linking two agency systems, would be owned by both agencies involved). A single NYCSRA document will likely contain sets of information with different owners or groups of owners.

Proposed Policy on Security-Sensitive Information

A. General Policy

1. The NYSDOT-retained Consultant (currently Consensus Systems Technologies Corporation, or ConSysTec) shall administer and comply with this policy.

2. The agencies and Consultant agree that they will not release any information that has not been unanimously approved for release.

3. If needed, the agencies may share unreleased information internally on a need-to-know basis, in a manner consistent with their respective security policies and procedures. However, agencies may handle their own information (information whose ownership is not shared) as they deem appropriate.

4. Any other party authorized by the partners to view non-released information must agree to comply with this policy.

B. Web Content Policy

1. Only the Consultant shall be authorized to upload information to the NYCSRA web site.

2. The Consultant must obtain specific, advance approval from all information owners before new information is released. No information that is deemed security-sensitive by at least one agency, or that is pending review, may be released. Existing NYCSRA content, or any information already released per regional and agency NYCSRA security policies and procedures, may be shared without further approvals and is not subject to regional NYCSRA security policies and procedures.

3. The Consultant must obtain specific, advance approval from all information owners before information is released. No information that is deemed security-sensitive by at least one agency, or that is pending review, may be released. The review procedure for web content is set forth below.

4. Agencies may have different standards for protecting what appears to be similar information, and agency standards may change from time to time. Therefore, the determination of whether specific information is "security-sensitive" must be made case-by-case by each agency. Information that affects multiple agencies must be reviewed and approved by each affected agency.

5. An agency may opt to redact information from release in whole or in part. Conflicts between agencies will be resolved by unanimous agreement. Unless and until unanimous agreement to release the information is reached, the information will be withheld from release.

C. E-Mail Transmission Policy

1. The partner agencies and Consultant will agree on either an encryption format that will constitute a secure means by which to transmit unreleased information via e-mail, or an alternative secure means to transmit such information.

2. All e-mail transmissions containing unreleased agency information shall be encrypted using the method agreed upon by the partner agencies, unless the contents have been approved for public consumption by each affected agency according to the Web

Content Policy and Review Procedure in this document. E-mail transmissions containing only procedural information (e.g., meeting dates and times) are excluded from this requirement.

3. Individual agencies, at their discretion, may opt at any time to transmit only their own information via non-secure methods.

Proposed Review Procedure for New or Revised NYCSRA Content

1. Each agency will provide to the consultant a single central point of contact ("agency contact").

2. The consultant shall inform all agency contacts of any proposed additions/revisions to the NYCSRA web site and publicly available documents in a timely manner for internal agency review under this interagency policy, and shall keep a record of all requests and responses.

3. Upon completion of internal agency procedures, each agency contact shall contact the consultant to either:
    −   Agree to the addition or revision of the content, or
    −   Request specific redactions to the content, or
    −   Block the addition or revision pending additional discussion with the regional partners, or
    −   Block the addition or revision permanently.

4. In the absence of explicit consent from each agency contact, new or revised content shall be blocked from addition to the web site or any other public document.

5. A partner agency or the consultant may request a discussion among agencies whose determinations are in conflict. The consultant shall work with the agency contacts to coordinate interagency discussions. In the absence of a unanimous decision, the information shall be withheld from release.

Next Steps

1. The above proposed policy and review procedure will first need to be reviewed and approved by the partner agencies.

2. When the policy and procedure are agreed to, the agencies must review the current content of the password-protected NYCSRA web site in light of the new regional policy and their internal policies.

3. Once the current information is approved and/or redacted as requested by the agencies, the consultant can be authorized to remove the password from the web site.