EGEA WG10

10th meeting – 30/09/2014

WG10 abstract

EGEA WG10 is a team of experts in PTI and networking, coming from different companies and working together on the definition of a standard communication protocol and data exchange format, with the following goals:

- plug & play functionality of vehicle test equipment in PTI test centres, repair and maintenance workshops and body shops, and for technical roadside inspection;
- public specifications and conformance / validation tools;
- non-profit, non-discriminatory basis;
- single pan-European solution, leveraging existing PTI implementations;
- align with the goals of the EU Commission's roadworthiness package – in particular the generation and secure transmission of harmonised electronic test certificates facilitating the cross-verification of PTI results for improved environment and road safety.

WG10 will work in coordination with the EU Commission and with the organization delivering the tender for Article 15 on the "Vehicle Information Platform" (UNISYS).

EGEA is in the best position to define a solution that is good for the industry (vehicle test equipment manufacturers, test centres, vehicle manufacturers) in terms of implementation costs, risks and times.

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Recent activities

29/4/2014 – 8th meeting of WG10

- First verson of Use Cases and High-level Requirements document
- Preliminary «Statement Of Work» as basis for the technical-commercial proposals
- Axonet and Actia offered to present proposals

8/7/2014 – 9th meeting of WG10

- Axonet presented two technical proposals, one based on the extensione of ASANET, the other called «vNext» and based on mobile internet technologies (RESTful, node.js)
- Actia presented a technical proposal based on their own system called VIMS (Vehicle Inspection Management System)
- The economic aspects could not be discussed as only Axonet presented the commercial offer on time.

11/8/2014

- Actia presented their commerical proposal, that was distributed to the WG10 together with the two commercial proposals from Axonet.

Sept. 2014

- Informal review of the proposals by some national associations members of EGEA.

30/9/2014 – 10th meeting of WG10

- Review of the technical-commercial proposals
- Preparation of a business plan in view of the EGEA General Assembly of 22/10/2014

USE CASE CLUSTERS

- Certification, Installation, Service
- PTI
- Equipment interaction and data exchange
- Vehicle troubleshooting and repair
- Data security

Preliminary evaluations by WG10

Decision factors	ASANET based	vNext based	VIMS based
Modern technology / life expectance	Based on Windows and .net framework	Modern cross-platform solution Supports REST Standardized data format	Modern cross-platform solution Supports both SOAP and REST, more possibilities for developers Standardized data format
Extensibility	Flexible	Extensible Customizable	Extensible Customizable
Server multi-platform	Windows only	Yes	Yes
Client multi-platform (including simple HW and mobiles)	Connection libraries available for free for selected platforms	Easier integration of smaller platforms	Easier integration of smaller platforms
Tried and tested (risks)	Less risks, proven on many installations Highest market penetration Stable	Proposed from the developer of ASANET: long experience and satisfied users and customers	More proven technology than vNext. Installed in 3 countries. Existing cross-platform solution Good risk management Experienced company, engaged in standardization activities, with satisfied users and customers
Complexity	Easy, simple to maintain	Light weight, low complexity "Keep it simple", no unnecessary modules. Flexible Easily available development tools	Light client, modular system, setup and troubleshooting may be complex. Easily available development tools
Cost for server, specs, test suite	Low investment Extension of existing product	Higher investment	Unknown at the moment
Cost for integration in test equipment	No cost for equipment already connected to ASANET		
Time to market	Available in 6 months	Available in 12 months	Available in 9 months
Business opportunities		More opportunities	More opportunities

On the spot comments, not verified

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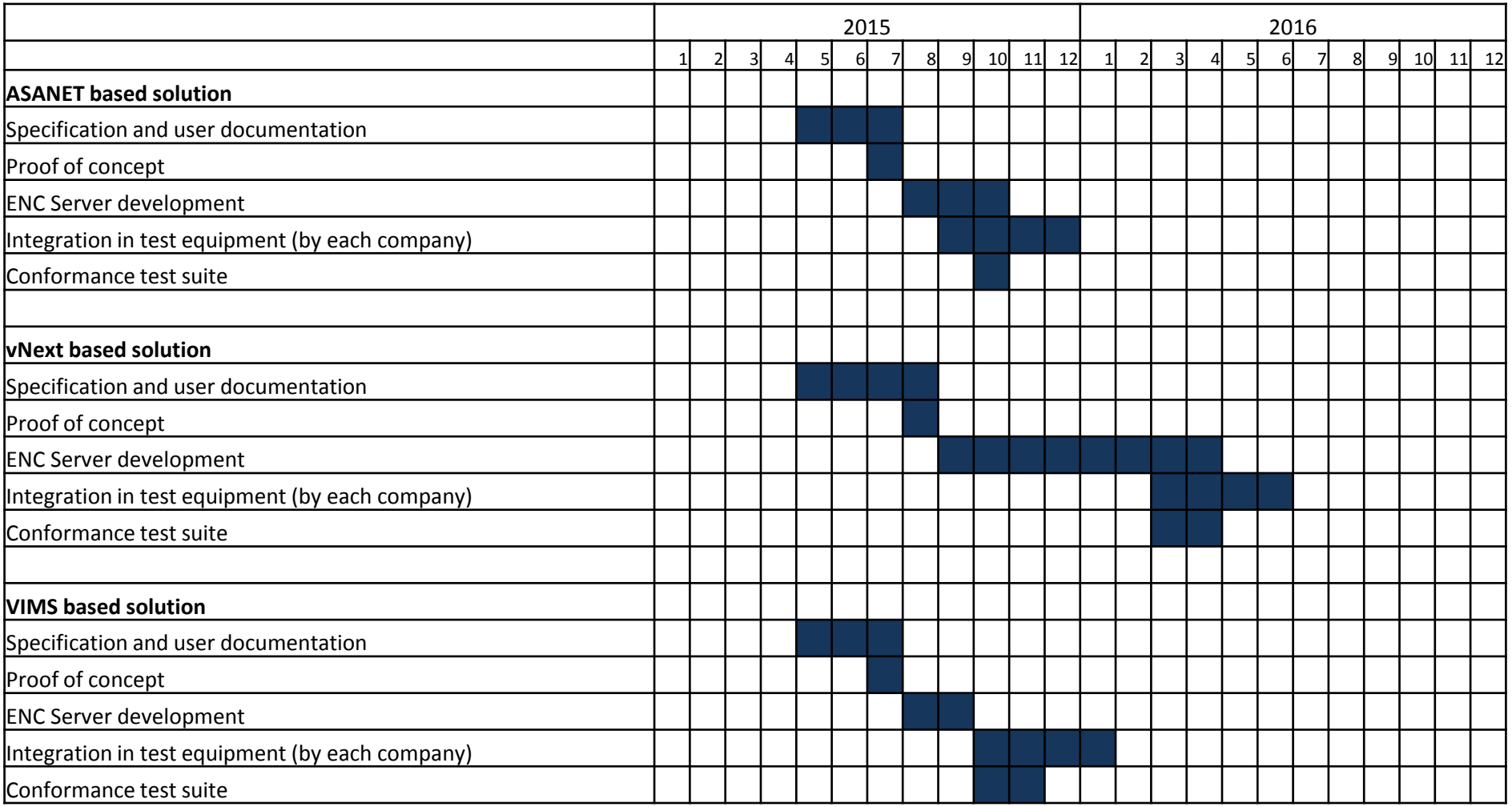
Schedule



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ASANET / vNext comparison

Topic	Requirement	ASANET	vNEXT
4.1.1 Operating system for ENC Server	Windows, Linux	Network manager only on Windows platforms	Fulfilled
4.1.2 Transmission protocols	TCP/IP	Fulfilled	Fulfilled
4.1.3 Standard data formats	XML, JPG	Some parts are in fixed block format. Results are XML	Fulfilled, XML, JSON
4.1.4 Documentation	Language+Keywords in English	Fulfilled	Fulfilled
4.2.1 Installation	Simple, user level	Fulfilled	Fulfilled
4.2.1 Server discovery	Automatic	Fulfilled	Fulfilled
4.2.1 Client acceptance	Automatic and manual	Only automatic	Fulfilled
4.2.2 Client compliance	Conformance test suite	Manual test with tools	Fulfilled
4.3.4 Client configuration	Optional group and sequence	DLoc and optional group	Fulfilled
4.2.4 Status report	Connection and communication test	Fulfilled (AwnDiag)	Fulfilled
4.2.5 New client types and services	Should not affect existing implementations	Fulfilled	Fulfilled
4.2.6 Adding new information to existing service definitions	Should not affect existing implementations	Fulfilled	Fulfilled
4.2.7 Software Updates	Provide version information and updates to clients	Possible with new service definition and implementation	Possible with separate module
4.2.8 Device information	Client shall provide information to ENC Server	Client information partially embedded in test results. Additional information possible with new service	Fulfilled
4.2.9 Diagnosis	Diagnosis tool shall be available	Fulfilled (AwnDiag)	Fulfilled
4.3.1 and 4.5.1 Order and status	Create, distribute and modify order data	Fulfilled	Fulfilled
4.3.2 Time synchronization	ENC server shall provide time	Fulfilled	Fulfilled
4.3.3 and 4.3.4 Vehicle data	Separate modules	Separate modules	Separate modules
4.3.6 and 4.5.2 test results	Shall transport any kind of data	Fulfilled	Fulfilled
4.3.7 and 4.5.3 Retrieve results	Client can request former results	Fulfilled	Fulfilled
4.4.1 Trigger action	Perform action on specific client	Possible with new service definition	Fulfilled
4.4.2 Exchange live data	Live exchange directly and via ENC	asanetwork LiveStream only via server	Fulfilled
4.4.3 Remote control	Request client to perform a command	Fulfilled	Fulfilled
4.6 Security	Shall be provided via public/private key infrastructure	Possible, provided by clients	Fulfilled, provided by clients

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SOW coverage

SOW Item	ASANET	vNEXT	VIMS	
Technical specification of the ENC interface, including definition and description of services and data, to allow manufacturers of ENC clients to connect to the EGEA Net	€ 4'000	€ 28'000		€ 40'000
Technical specification of the ENC server interface	€ 4'000	€ 16'000		
ENC server software (as source code or in binary format for Windows and Linux)	€ 16'000	€ 108'000		
Conformance test plan	€ 4'000	€ 8'000		
Conformance test suite (also as source code)	€ 16'000	€ 20'000		
Implementation guideline	€ 4'000	€ 8'000		
Schedule				
Documents will be publicly available (not necessarily free of charge to cover the costs)				
Support to developers of ENC Clients (equipment manufacturers, DMS and PTI application developers), Monday-Friday, 8:00-17:00 CET, in English	2000 € per year per company	2000 € per year per company		
License terms				
To be quoted separately:				
Conformance test plan for the ENC server				
Conformance test suite for the ENC server (also as source code)				
Technical specification of the ENC server with details to allow independent development of compliant ENC server				
ENC client platform module for integration in the devices (as binary or as source code in different languages: C#, Java, C)				
Not to be quoted at present:				
Connection to the VIP for vehicle PTI data retrieval				
Certification activities				

Troubleshooting and support to PTI centers will be responsibility of the equipment manufacturers or PTI application and DMS providers.

Needed if different ENC servers will be allowed vs. one unique ENC server

Everyone can choose whether to develop the interface or buy it from third parties

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Business Plan

START-UP COSTS	Cost ASANET	Cost NEW	FIXED COSTS	Cost (€)
Legal consultation	10'000 €	10'000 €	Computer	500 €
EGEA secretariat and advisory	12'600 €	12'600 €	Database	500 €
External consultancies (IT, encryption, privacy)	3'000 €	3'000 €	Insurance	?
WP1: Technical specifications for the "EGEA Net Communicator" and for the connected clients	8'000 €	40'000 €	Laboratory costs	0 €
WP2: Software development	16'000 €	60'000 €	Manpower	20'000 €
WP3: Conformance test documents and tools	20'000 €	28'000 €		
WP4: Support package	4'000 €	8'000 €		
WP5: Certification				
Logo creation	3'000 €	3'000 €		
Database creation	1'000 €	1'000 €		
Website adaptation	1'500 €	1'500 €		
Registation of collective mark (EGEA Label)	1'500 €	1'500 €		
Creation of leaflet and printing thereof	5'000 €	5'000 €		
Creation of contract for use of EGEA Label	1'000 €	1'000 €		
Setup internal process	1'000 €	1'000 €		
Total start-up costs	87'600.00 €	175'600.00 €	**Total fixed costs**	21'000.00 €

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PROs and CONs for AICA

Advantages for AICA associates

- Lower development costs to implement a single protocol for PTI (in countries where a different protocol is not mandated) and workshops.
- Better service to customers, reliability and flexibility in combining equipment from different manufacturers.
- Easier entry into other markets
- Easy integration with mobile devices in future develpments
- Common interface for connection to the VIP
- …

Costs / risks

- Increased competition in the domestic market
- Participation to the development and maintenance costs
- …

AICA's *informal* position

The AICA group of diagnostic equipment manufacturers expressed the following comments to the report from WG10 and the three proposals for EGEA NET:

- The group prefers one of the lower cost solutions (ASANET or VIMS). If ASANET is chosen, a version of ENC server running on Linux is desired, possibly in a later phase.
- The group is neutral regarding the choice between a single ENC server or several ENC servers. In the second phase, the possibility of an alternative solution should be contractually guaranteed in case the developer of the ENC server were no longer able to fulfill his commitments.
- The EGEA NET should be interfaced at a high level with MCTCNET2, in order to reuse the connectivity functions to the VIP in the Italian PTI installations.
- EGEA NET is a very good starting point for those countries that do not have an infrastructure in place as MCTCNET2 or OTC-LAN, and could also be used in repair workshops. However, there is no assurance that the authorities in those countries will adopt the EGEA solution without country-specific modifications.
- Considering the Italian situation, MCTCNET2 is not expected to be replaced in the short term, and maybe even in the long term. The advantages for the Italian industry are not clear. The participants don't show willingness of their companies to finance the development of EGEA NET at the moment.

THE EGEA DILEMMA

Freely adapted form “The Prisoner’s Dilemma”

http://en.wikipedia.org/wiki/Prisoner%27s_dilemma

- Public, non-discriminatory EGEA NET
- Development cost: €20k per company (example)
- Savings by using EGEA NET: €100k per company (example)

	Enough companies cooperate: EGEA NET is developed	Not enough company cooperate: EGEA NET fails
Company A cooperates	Company A “wins” €80k	Company A “loses” 20k
Company A does not cooperate	Company A “wins” €100k	Company A “loses” nothing

RESULT: no cooperation => failure

Is the EGEA project financing model good for WG10?

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Thank you!

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