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Virtual Automation Networks

Work Package 10
Exploitation and Dissemination

Task 10.1
Information Dissemination

Deliverable 10.1-2 V3
Plan for using and disseminating knowledge

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Executive summary

This deliverable belongs to task 10.1 “Information Dissemination”, from work package 10, “Exploitation and Dissemination”.

This is the third version of this deliverable and presents the dissemination activities carried out by VAN partners from September 2006 to August 2007, as well as the planned ones within the next twelve months. The first version of this document [D10.1-2 V1] describes the approach taken for dissemination, as well as the strategy followed.

This deliverable is structured in six chapters and two appendices. The first chapter is an introduction. The second chapter includes accomplished dissemination actions from September 2006, after the previous plan for using and disseminating knowledge. Progress of the project regarding achieved deliverables is also included. The third chapter is structured in the same way as chapter two, but introduces future dissemination actions planned for the next twelve months. Only deliverables for the next six months are included [DoW07] because the following ones will be approved at the next project review (October 2007). The fourth chapter deals with the description of novelties related to VAN channels and tools. The fifth chapter shows the results obtained from the assessment procedure described in the first version of this deliverable [D10.1-2 V1]. Assessment results have been presented in a graphical way for a clear and better understanding. Finally, chapter six includes a set of conclusions from the report.

Two appendices are included at the end with information collected from VAN partners regarding the assessment procedure and the dissemination events.

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1 Introduction

During the first year of the project, tasks dealing with status and analysis, state of the art and requirements, have been the key issues. During the second year, all technologies, concepts and mechanisms in focus of this project, have been specified in detail. We can mention the specification of wireless communication, real time mechanisms and security mechanisms for automation, as well as the specification of a safety layer.

WP2 (Open Platform & System) is the central instance for the overall coordination of implementation work (prototypes and demonstrators) and as such, is supporting the integration of all other WPs in the VAN platform.

To support this, a new board was created at the beginning of this period: the Technical Project Coordination Committee (TechPCC). Its target is the development of a roadmap for the implementation work. First results are being achieved and shown to the public through the appropriate channels. Target audiences are mainly industry and research organizations though not exclusively. VAN partners aim to reach a wider audience and are using the available dissemination tools to achieve it (see chapter 4).

1.1 VAN vision for laymen

Following the recommendation of the EC experts, a VAN laymen story has been worked out:

Let's say you want to buy a new sports car. How would you order it? In black, with light-coloured seats, or maybe white with a silver side frame, or red with a manual transmission? The variety of consumer tastes has a major impact on industrial production, as it forces manufacturers to become more flexible and react to the growing demand for different designs. A state-of-the-art automotive paint shop today paints one body green, the next blue, and a third white. Bumpers and seats matching the vehicle colour also need to be mounted. Such individualization is just one trend that is changing production processes. In other words: The time from original idea to finished product is getting shorter. This is having an impact on everyone in the production process — from product designers to production managers, suppliers, and distributors, all of whom need to access relevant product data more quickly than ever before. Production floors and offices are thus set to converge globally. It is, in short, a vision of a virtual world of communication in which data flows from the factory paint shop to the executive suite. But for this vision to be translated into reality, local partner networks need to be able to exchange data — something they can't do now because most networks have separate standards. What is needed, therefore, is a medium that communicates information across all local interfaces. This medium will be Ethernet. Ethernet is nothing new. It's been used for more than 30 years to link office computers, while Industrial Ethernet has been networking production control systems for over 20 years. Now, however, Ethernet is set to take control of individual machines in factories. Yet significant challenges remain to be overcome. One big issue is real-time data transmission. In office Ethernet systems, if a data packet has to wait a couple of seconds because the information highway is occupied, no one will notice. But that can't be allowed to happen with production machines, the control processes for which often occur in the space of milliseconds or even microseconds. Imagine a printing machine with several rollers, if just one roller fails to operate completely in synch with the others, you can throw away the result.

But not all production areas can be connected via cables, which is why wireless solutions should be employed in difficult-to-reach areas, not to mention when it comes to driverless transport systems and rotating components.

Against this background the Vision of VAN is an open universal, seamless multivendor networking solution which is able to link worldwide components in process and factory automation from the single

sensor in one factory plant to remote machinery in de-centralized enterprises/sites. VAN's interoperable communication can be realized via fieldbuses, office networks and even the public communication infrastructure – wired or wireless.

Core of this approach is Ethernet, based on the IEC standard 61158 Type 10, enlarged by web services and other IT based technologies to enable VAN's all-embracing communication approach. By means of a common engineering model the user may not see the single building blocks of the underlying communication infrastructure and regards the whole network as a homogeneous system. To realize this totally new concept, the VAN solution provides scalable real-time, safety and security strategies, needed to meet QoS requirements over the whole Virtual Automation Network, necessary in automation-science and –practice.

2 Accomplished dissemination

2.1 Past events

There follows a list with the most remarkable events VAN partners have attended from months 13 to 23, that is, from September 2006 to August 2007.

Short name	Full name	Date
IEC TC65	IEC TC65 "Industrial Measurement and Control" SC65C "Digital Communications" MT9 Meeting	Sep, 2006
ZVEI GA KA	ZVEI GA KA (Communication Committee of ZVEI)	Sep, 2006
ETFA 2006	11 th IEEE International Conference on Emerging Technologies and Factory Automation	Sep, 2006
BIAS 2006	32 nd Biennial international exhibition of automation, instrumentation, microelectronics and ict for industry	Sep, 2006
Wireless Technologies Congress	Wireless Technologies Congress	Sep, 2006
GMA	GMA permanent working group FA 5.21 "Radio Based Communication" within the German VDI/VDE-Gesellschaft	Sep, 2006
Industrial Communication Congress	Industrial Communication Congress	Sep, 2006
Marcus	Marcus evens, Flexibility and IT-security in Automation with Ethernet	Sep, 2006
User Forum	User Forum	Oct, 2006
SPS/IPC/Drives 2006	SPS/IPC/Drives 2006. Electric Automation. Systems and Components	Nov, 2006
ANIPLA 2006	International Congress ANIPLA 2006. "Methodologies for Technologies in Automation"	Nov, 2006
IAONA JTGWs	IAONA Joint Technical Working Groups (JTGWs)	Mar, 2007
ISA SP 100 Meeting	ISA SP 100 Meeting	Mar, 2007
Praxis Profiline	Praxis Profiline (http://www.praxis-profiline.de/index-e.htm)	Apr, 2007
Hannover Messe	Hannover Messe	Apr, 2007
Specialized discussion	Fachbereichskolloquium "Sichere Netzwerke"	May, 2007
ICCC 07	8 th International Carpatian Conference	May, 2007
Coexistence Guideline	Coexistence Guideline	May, 2007
ZVEI Workshop	ZVEI Workshop	May, 2007
System integration aspects	System integration aspects	May, 2007

WAMS 2007	International Workshop on Advanced Manufacturing Systems	Jun, 2007
GMA Congress ZVEI	GMA Congress ZVEI	Jun, 2007
PC 07	16 th International Conference on Process Control	Jun, 2007
IC61158	IC61158 Integration aspects for process industry	Jun, 2007
I*PROMS 2007	Innovative Production Machines and Systems Virtual Conference	Jul, 2007
WOCN 07	IEEE Fourth International Conference on Wireless and Optical Communications Networks	Jul, 2007
	Electronic development and production in the Czech Republic	Jul, 2007
	Netzwerksicherheit in der Automatisierungstechnik	Aug, 2007

Table 2.1 Accomplished dissemination events.

For a more detailed description of these dissemination events, please refer to Annex II.

Apart from this, it is worth to mention a number of events at national level:

- **RF Applications in Industrial Automation**

L. Rauchhaupt

RFM Seminar 2006 – RF product and testing applications for Machines and systems. Ylivieska, Finland, 7th – 8th September 2006

- **Drahtlose Kommunikation in der Automation**

L. Rauchhaupt

Honeywell Automationstage 2006. 19th September 2006, Bremen

- **Wireless in Automation – Status und Trends**

L. Rauchhaupt

PROFIBUS International (PI) Strategie Sitzung. 21st September 2006, Karlsruhe

- **Koexistenz im Bereich Wireless**

Lutz Rauchhaupt, Marko Krätzig

ZVEI GAKA 31st January 2007, Frankfurt

- **Secure wireless communications in industrial automation with ZigBee**

H. Adamczyk, L. Rauchhaupt, J. Witkowsky

Embedded world conference 2007. 13th.-15th February 2007 Nürnberg

- **Erfahrungen beim Test von Funklösungen für die Automation**

M. Krätzig, L. Rauchhaupt

Wireless Automation, 6. Jahrestagung Funkgestützte Kommunikation in der industriellen Automatisierungstechnik. 28th February-1st March 2007 Magdeburg-Barleben

- **Tests to assess Coexistence of Wireless Industrial Automation Solutions in 2.4GHz Band**

L. Rauchhaupt

ISA SP100.11a Working Group for Wireless Industrial Automation Networks. 20th March 2007 Karlsruhe

- **Über die Bewertung der Koexistenz industrieller Funklösungen**

L. Rauchhaupt

Fachpresseworkshop ZVEI. 15th May 2007 Frankfurt

- **Funktionale Sicherheit und Informationssicherheit von Automatisierungssystemen**

H. Adamczyk

Informations- und Kommunikationsnetzwerke für die Abwassertechnik 2369/07-1. 15th May 2007 Weimar

- **Kenn- und Einflussgrößen zur Bewertung von Funklösungen für die industrielle Automation.**

M. Krätzig, L. Rauchhaupt, A. Gnad

GMA-Kongress 2007. 12th – 13th June 2007, Baden-Baden

- **Handlungsbedarf bei drahtlosen Netzwerken für die industrielle Automation**

L. Rauchhaupt

Statusseminar 2007 Mobile Kommunikation des Projektträgers für das Bundesministeriums für Bildung und Forschung DLR, Projektbüro Mobile Kommunikation. 14th June 2007 Mainz

2.2 Deliverables

During this second year of the project, work package 2 has been the central instance for the overall coordination of implementation work (this includes prototypes and demonstrators), and has been integrating inputs from all technical work packages, as well as coordinating activities that needed synchronization. To accomplish this effectively, tasks 2.2 and 2.3 have been extended in duration and task 2.4 has started earlier than initially planned. Moreover, a Technical Project Coordination Committee (TechPCC) has been set up to ensure implementation and synchronization of work among the different work packages, as well as coordination of technical issues resulting from the deliverables.

At this stage, all the technologies, concepts and mechanisms which are in focus of VAN project have been specified in detail. It's worth to mention: the specification of wireless communication, real-time and security mechanisms, and the specification of a safety layer for automation.

A common tool interface, as well as the interfaces for integration and coupling of the different engineering tools, are being specified during the current period. Therefore, implementation and integration work has been started, leading to the first parts of prototypes within single WPs.

The following graphs represent the progress achieved along the last year of the project. Deliverables are classified both by type and by work package.

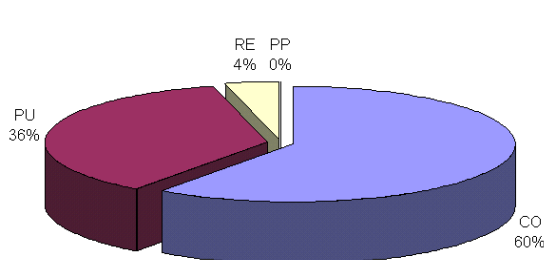


Fig. 2.1 Deliverables achieved from September 2006 to August 2007, classified by type.

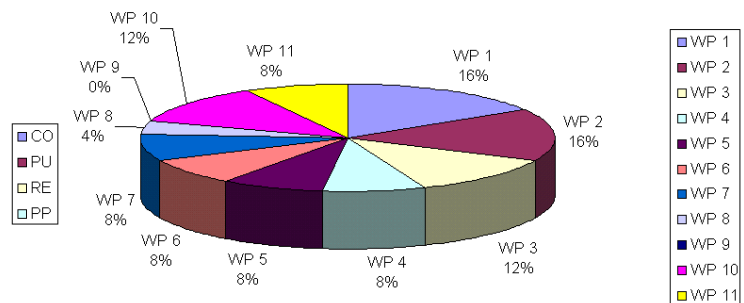


Fig. 2.2 Deliverables achieved from September 2006 to August 2007, classified by work package.

	Year 2006				Year 2007							
	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
WP1												
T1.2												D01.2-1 V3
T1.3					D01.3-4							D01.3-1 V3 D01.3.5 V3
WP2												
T2.2												
T2.3											D02.3-1	
T2.4												D02.4-2
WP3												
T3.2												
T3.3											D03.3-1	
T3.4										D03.4-1		
WP4												
T4.2												
T4.3											D04.3-1	
T4.4												D04.4-1
WP5												
T5.2												
T5.3					D05.3-1							
T5.4												D05.4-1
T5.5												
WP6												
T6.2												D06.2-1
T6.3												
T6.4												
T6.5												D06.5-1
WP7												
T7.2						D07.2-1						D07.2-2
T7.3												
WP8												
T8.4										D08.4-1		
T8.5												
T8.6												
T8.7												
WP10												
T10.1												D10.1-2 V3
T10.2												
T10.3								D10.3-1 V1			D10.3-2 V2	
WP11												
T11.1						D11.1-2-V2						D11.1-3-V2
T11.2												

Fig. 2.3 Deliverables accomplished from September 2006 to August 2007.

The corresponding deliverables are listed below:

D01.3-4	Socioeconomic in-itinere assessment report M17
D05.3-1	Specification of safety mechanisms; Service Definition and Protocol Specification M17
D07.2-1	Architecture Specification M18
D0.32-1	Specification of Wireless Communications for Automation M18
D11.1-2 V2	Intermediate Progress and Activity Report M18
D10.3-1 V1	European Competence Group – Report 1 M20
D02.2-3	TechPCC Platform Overview M22
D03.4-1	Test Specification; Design Specification M22
D08.4-1	Specification of architecture and technologies for VAN engineering tool platform M22
D02.3-1	Application specific Architecture for Automation, VAN Profile for Process-, Manufacturing- Industry M23
D03.3-1	Specification of Awareness for Automation M23
D04.3-1	Service Definition and Protocol Specification and specifics of RT mechanisms in embedded closed loop control M23
D10.3-2 V2	Gender-action-plan report – update M23
D01.2-1 V3	Update of Requirements and Technological Roadmap M24
D01.3-1 V3	Trend Screening on VAN Relevant Technologies M24
D01.3-5 V3	Self-Evaluation Criteria and Technical Targets M24
D02.4-1	Software Architecture and Interface Specification (Preliminary) M24
D02.4-2	Software Prototype Config ASE Wev Service (Preliminary) M24
D04.4-1	Implementation of RT mechanisms in embedded devices and systems for industrial environments, QoS mechanisms in Telecommunication networks (Preliminary) M24
D05.4-1	Safety Mechanisms implementation in Process Industry and Manufacturing Industry; Prototype devices (Preliminary) M24
D06.2-1	Definition of Security mechanisms in industrial environments addressed by VAN; Catalogue of attack scenarios. M24
D06.5-1	Test Report (Preliminary) M24
D07.2-2	VAN QoS over public networks specification; Network Management and common signalling specification M24
D10.1-2 V3	Plan for using and Disseminating Knowledge M24
D11.1-3 V2	Progress and Activity Report M24

Table 2.2 List of deliverables from September 2006 to August 2007.

From the above list, D03.2-1, D07.2-1, D10.3-1 V1, D08.4-1, D02.3-1, D10.3-2 V2, D01.2-1-V3, D10.1-2 V3, and D01.3-1 V3 are public. Once they have been delivered and approved by the EC, they will be available to the general public through VAN web site.

Below there is a graph summarizing dissemination events and deliverables accomplished by VAN membership from September 2006 to August 2007 (see Annex II)

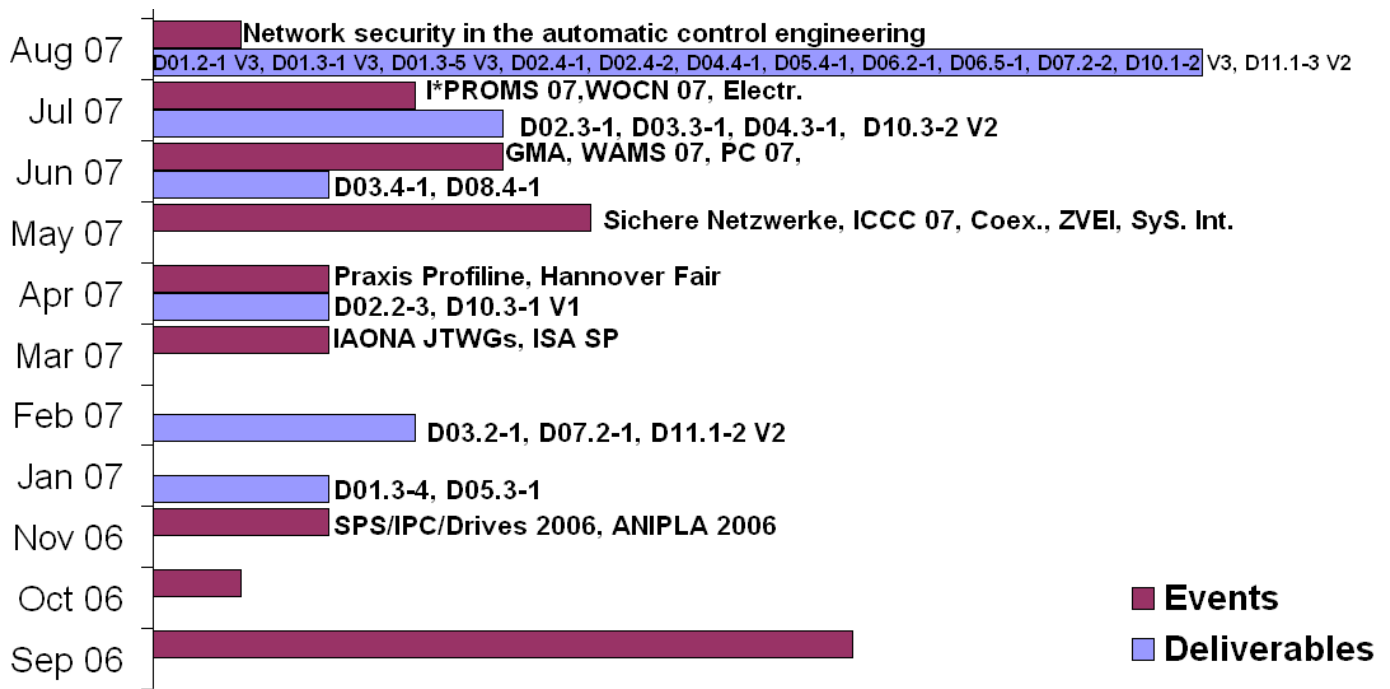


Fig. 2.4 Accomplished dissemination events and deliverables from September 2006 to August 2007.

2.3 European Competence Group related events

VAN European Competence Group (ECG) is intended to be a consortium of possible end-users from factory and process automation, device and machine suppliers, system integrators and companies that will be able to provide VAN technology in the future [D10.3-1 V1]. Within this framework, VAN ECG started its performance inside task 10.3 last year, on July.

Preparation activities have been taking place along the first 18 month project period. This way, important contacts were established in Hanover and the SPS/IPC/Drives fairs during last year. Now, a first official meeting has been celebrated at the Hanover Fair -18th of April, 2007-. (For more information on this, please refer to Appendix I, section I.1 of this document). The second one will follow soon (SPS/IPC/Drives, November 2007).

The main objective of this first ECG meeting has been to give an introduction on VAN main concepts and specifications, within a workshop and through a series of presentations after which the public had the chance to give feedback and comment. VAN speakers belonged to Siemens A&D, ifak, TSA and Schneider Electric.

25 people on average attended this workshop and showed especial interest on wireless communication. They were invited through selection from a database, and provided with publicity material (VAN flyers, leaflets, etc)

2.4 Press conference

Last 16th of August, a press conference took place at the premises of Brno University of Technology. The purpose was to inform about VAN project achievements and to do it to a wide non specifically technical audience.

Information was disseminated through regional and national press, and national television, following the following time schedule:

- 17th August 2007 – Brnensky denik (Brno Daily Press), page 3, available at http://brnensky.denik.cz/zpravy_region/rizeni_tovarny_20070816.html

- 27th August 2007 Mladá Fronta DNES (Daily Press Today) – page 1 of Brno Regional Feature – available at: http://brnensky.denik.cz/zpravy_region/rizeni_tovarny_20070816.html.
- 16th August 2007 – TV NOVA, Afternoon news – 5-minute shot including interview.
- 17th August 2007 – TV Prima, Regional Minutes – 5-minute shot including interview.
- 17th August 2007 – Metro (daily press), Brno issue.
- 5th September 2007 – Události na VUT v Brně (BUT Events – BUT dissemination papers)

3 Future dissemination

3.1 Already planned dissemination events

The following table shows a list with events that will take place between the present time and September 2007. VAN members will be there presenting the last results achieved within the project.

Short name	Full name	Date
MicroNanoReliability 2007	1 st International Conference on Microreliability and Nanoreliability in Key Technology Applications	Sep, 2007
ETFA 2007	12 th IEEE Conference on Emerging Technologies and Factory Automation	Sep, 2007
BGIA/BGFE	BGIA/BGFE	Sep, 2007
Professional Training course	Professional Training course	Sep, 2007
	Ethernet Fieldbus RT – Performance discussion	Sep, 2007
Specialized Symposium	Fachsymposium „sichere Feldbusse“ BGIA/BGFE	Sep, 2007
ITEA 2 Symposium	Information Technology for European Advancement	Oct, 2007
SPS/IPC/Drives 2007	SPS/IPC/Drives. Electric Automation. Systems and Components	Nov, 2007
Sensor + Test	Sensor + Test	May, 2008
I*PROMS 2008	4 th I*PROMS Virtual International Conference on Intelligent Production Machines and Systems, 2008	Jul, 2008
INDIN 2008	6 th International IEEE Conference on Industrial Informatics (INDIN 2008)	Jul, 2008
IFAC 08	17 th IFAC World Congress	Jul, 2008
Innotrans	International Trade Fair for Transport Technology Innovative Components Vehicles Systems.	Sep, 08

Table 3.1 Planned dissemination events from September 2007 to August 2008.

For a more detailed description of these dissemination events, please refer to Annex II.

Besides, VAN partners refer to the project at their organizations' home pages in a number of ways:

- SIEMENS AG plans to include a banner on SIMATIC NET Homepage. There is already a link to VAN project web site.
- Machining Centers Manufacturing S.P.A shows their R&D strategy and potential exploitation of VAN results.

- Otto von Guericke University of Magdeburg includes several references at:
 1. <http://www-e.uni-magdeburg.de/fodb/fodb/index.php3?option=projektanzeige&pid=6758&lang=&perform=&PHPSESSID=34221b029956b1907ddbdeb8b544da7a>
 2. http://www-f.uni-magdeburg.de/~wiaf/projekte/projekte_aktuell_eng.php
- Fidia S.p.A:
 - http://www.fidia.it/english/research_eng_fr.htm
- Ifak Magdeburg:
 - <http://www.ifak-md.de/index.php?id=611&L=3>

3.2 Expected progress of the project

During the third year of the project, developments are expected towards dedicated solutions that implement the functions, specified so far, into industry proven hardware and software modules. Prototypes are to be integrated into different kinds of automation equipment. That is to say, they will be implemented portably to be used on several different platforms and shall be optimised to different industrial requirements.

The second year project review is to be held on October 2007 and the current Description of Work of VAN project [DoW07] only describes work to be done until February 2008. So, the expected deliverables for that period of time are:

- D08.4-2 Specification of object model and tool interfaces for VAN engineering tool platform
- D05.5-1 Test and Validation of Prototypes
- D02.4-1 Software Architecture and Interface Specification
- D11.1-2 V3 Intermediate Progress and Activity Report

The following graphs classify these deliverables by type and by work package

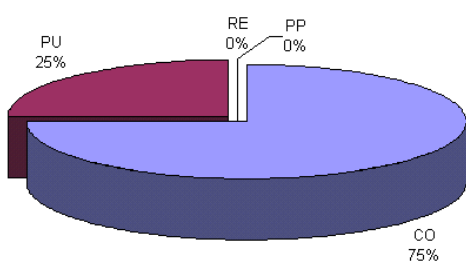


Fig. 3.1 Expected deliverables from September 2007 to February 2008, classified by type.

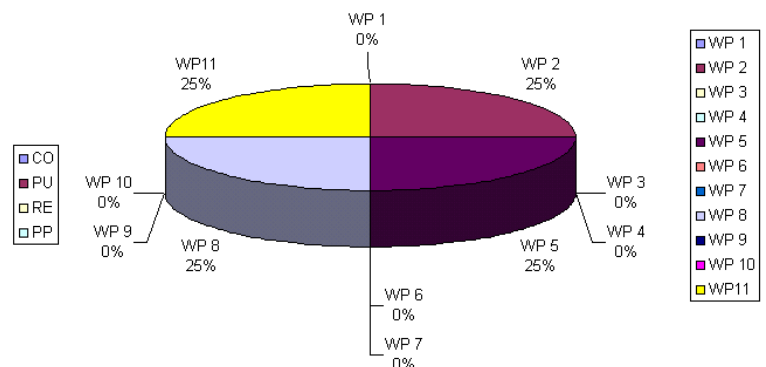


Fig. 3.2 Expected deliverables from September 2007 to February 2008, classified by work package.

	Year 2006				Year 2007												Year 2008	
	Se	Qc	No	De	Ja	Fe	Mar	Ap	May	Jun	Jul	Au	Se	Qc	No	De	Ja	Fe
WP1																		
T1.2													D01.2-1 V3					
T1.3					D01.3-4								D01.3-1 V3					
WP2													D01.3-5 V3					
T2.2																		
T2.3												D02.3-1						
T2.4													D02.4-1					D02.4-1
WP3													D02.4-2					
T3.2																		
T3.3												D03.3-1						
T3.4											D03.4-1							
WP4																		
T4.2																		
T4.3												D04.3-1						
T4.4													D04.4-1					
WP5																		
T5.2																		
T5.3					D05.3-1													
T5.4													D05.4-1					
T5.5															D05.5-1			
WP6																		
T6.2													D06.2-1					
T6.3																		
T6.4																		
T6.5													D06.5-1					
WP7																		
T7.2					D07.2-1								D07.2-2					
T7.3																		
WP8																		
T8.4												D08.4-1		D08.4-2				
T8.5																		
T8.6																		
T8.7																		
WP10																		
T10.1													D10.1-2 V3					
T10.2																		
T10.3												D10.3-1 V1	D10.3-2 V2					
WP11																		
T11.1					D11.1-2-V2								D11.1.3-V2					D11.1.2-V3
T11.2																		

Fig. 3.3 Planned deliverables, from September 2006 to February 2008.

Below there is a graph summarizing dissemination events and deliverables planned by VAN membership between September 2007 and August 2008. Past events and deliverables since September 2006 are also included.

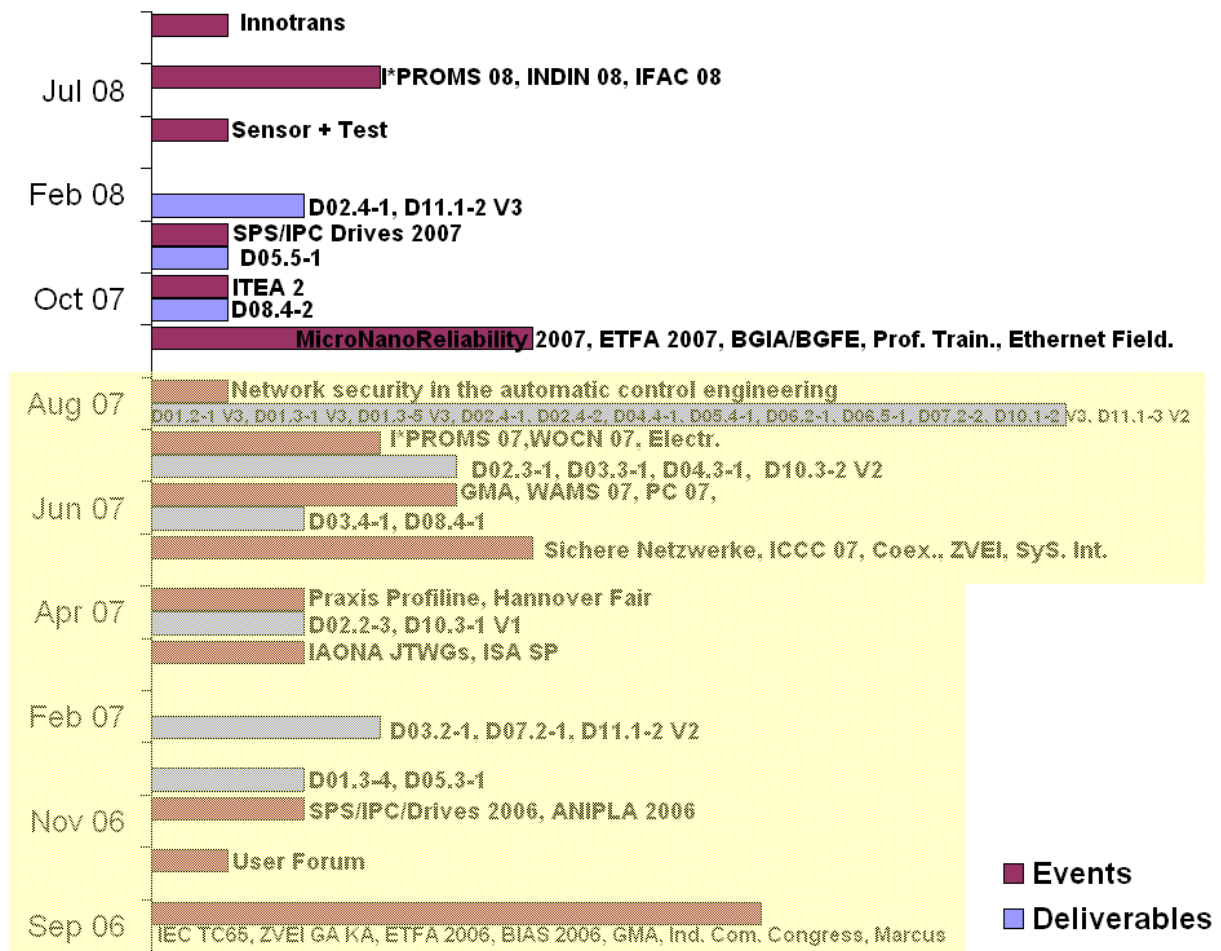


Fig. 3.4: Dissemination events and deliverables from September 2006 to August 2008.

3.3 ITEA 2 Symposium

An important future event that deserves to be mentioned here is the **ITEA 2 Symposium**.

VAN project will be present at this event that takes place in Berlin on the 18th and 19th of October, 2007. A VAN demonstrator system consisting of several IPCs and PCs will show parts of the latest developments of the project. In particular, first implementation parts of the web service related architecture, including the establishment of the VAN communication tunnel, will be demonstrated.

Additionally, several posters, short presentations and flyers will support the performance of the project to reach a broad audience of potential interested parties. Also, a VAN expert will be available on site to answer questions.

An important part of the ARTEMIS technology platform is to co-ordinate better national, EUREKA and IST research programmes. The work started already last year together with the ITEA 2 cluster in EUREKA. ITEA 2 is a strategic pan-European programme for advanced pre-competitive R&D in software for Software-intensive Systems and Services. Each year ITEA 2 organises a two days symposium to present the results of the ITEA 2 projects to the ITEA 2 stakeholders. The major topic at this symposium is always the exhibition of the results of all the running projects in ITEA 2, as well as the exhibition of several IST projects during this event. Therefore, among some others, the IP VAN has been chosen this time to take part at the ITEA 2 event.

3.4 Foreseen indicators for some future events

For a number of future events in which VAN consortium will be participating, Aucoteam GmbH has made a realistic estimation of indicators in terms of: number of interested organizations and orders. This figures are displayed in the table below.

Event	SPS/IPC/DRIVES 07	SPS/IPC/DRIVES 08	Sensor + Test	Innotrans
Contribution	Hierarchical control systems for bio power plants	Security solutions for control systems	VAN-based sensor / actuator networks	Using public network for monitoring and control
Number of interested organizations	70	60	80	40
Orders	1	2	2	2

Table 3.2 Foreseen indicators from Aucoteam GmbH.

4 VAN Dissemination Channels and Tools

4.1 Channels

4.1.1 Web site

Along the last year of the project, important progress has been achieved on the technical side. This has led to a number of publications and participations in events, mainly focused on the industry audience. The web site contents have been updated accordingly, showing a series of publications and events inside the specific section "News and Events".

The general layout and appearance has been improved along the last months, and contents continue being regularly updated.

4.1.2 Groupware

This internal dissemination channel has experimented no remarkable changes along the last year. It goes on serving as an ideal tool for information exchange and database among the consortium.

4.2 Tools

4.2.1 Newsletter

The third issue of VAN newsletter was released on last April. It is currently available at: <http://www.van-eu.eu/sites/van/pages/files/newsletter170407.pdf>.

The corresponding sections are the following ones:

- **Last contributions to VAN:** Contains a brief description of the main dissemination activities performed by VAN partners during the last months. This time, attention is focused on Ifak Magdeburg, Siemens, Schneider Electric, CVS (University of Magdeburg) and Politecnico di Milano.
- **Interview with Mr. Ralf Greiner-Jacob:** The technical coordinator of VAN gives his vision on the first prototypes and the goals to be achieved through them. He also tells which are the future steps to be taken along the second year of the project.
- **Meet the partners:** Three new partners are introduced. This time it is the turn for: Politecnico di Milano, Center Distributed Systems (University of Magdeburg) and Teleport Sachen-Anhalt.
- **Future Events:** Includes the most remarkable future events for VAN dissemination interests. This time a reference was made to the first workshop organized within the framework of the European Competence Group. Siemens A&D, Ifak, TSA and Schneider Electric participated in this workshop within the Hanover Fair, the world's biggest industrial fair.
- **Meetings:** As usual, this section includes the most relevant recent meetings.

Everyone accessing <http://www.van-eu.eu/> can download VAN newsletters freely. Furthermore, an email list of selected addressees has been built in order to get to the appropriate audiences. These people come from public and private organizations that might be interested in VAN results. Part of them are currently participating in embedded systems projects.

Currently, VAN newsletter is being sent regularly to around 300 people. Professional interests have not been the only criteria to select them because a broader audience is pursued. This way, some of the organisations included are: Universitat of Salzburg, University of kalsruhe, Ghent University,

Trinity College Dublin, Delft University of Technology, Philips, European Institute of Information Technology Education, Ecole Nationale Supérieure des Telecommunications, CNR, IBM, ABB, France Telecom, Fraunhofer FIT, Nokia Research Center, Ericsson AB, etc.

4.3 Web page and GroupWare indicators

The most relevant information on the impact of the web page and GroupWare comes from the number of visits. A graph is displayed below with data regarding the visits made along the year 2007.

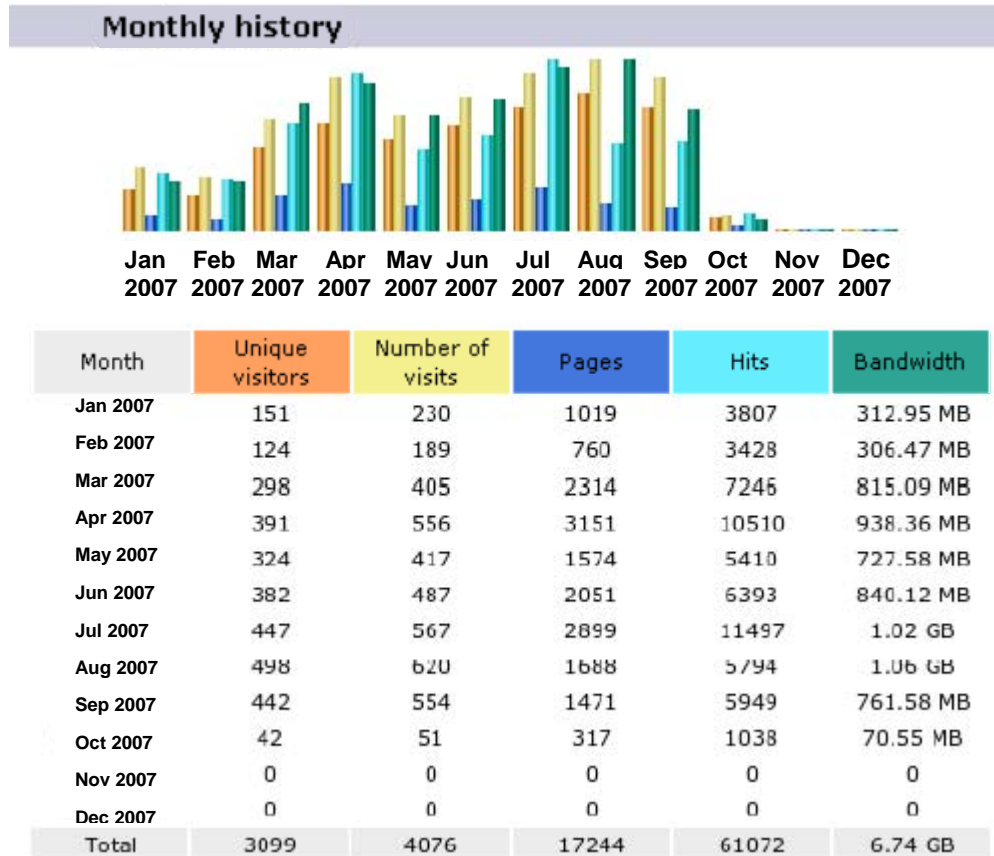


Fig. 4.1 Monthly indicators.

The origin of the users accessing the web and GroupWare is also important. Next, a table is shown with the countries from which visits have been performed.

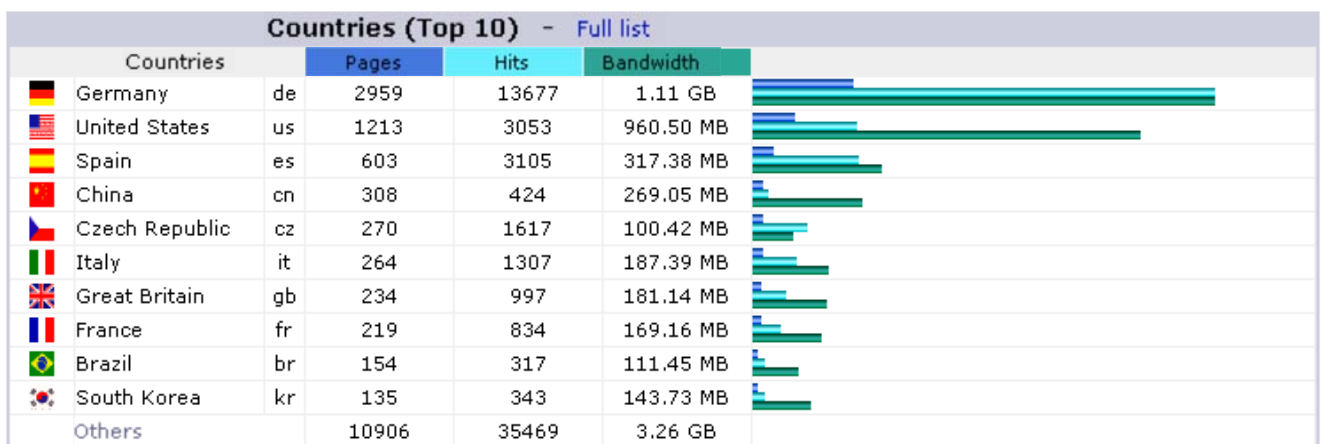


Fig. 4.2 Visits per Country.

There follows a table including the list of more visited sections inside VAN web site. This data have been gathered for years 2006 and 2007.

Pages-URL					
Total: 1002 different pages-uri	Viewed	Average size	Entry	Exit	
/phpgroupware/filemanager/index.php	16775	374.94 KB	128	700	
/vangroupware/filemanager/index.php	15343	331.14 KB	65	579	
/	3332	7.62 KB	1309	438	
/phpgroupware/login.php	2622	3.04 KB	951	584	
/vangroupware/login.php	2425	3.02 KB	748	563	
/themes/van/latestnews.htm	1740	1.12 KB	295	340	
/phpgroupware/home.php	1478	6.54 KB	24	17	
/vangroupware/home.php	1379	6.31 KB	15	12	
/van/	1066	8.22 KB	570	200	
/projectinfo	845	9.57 KB	32	72	
/taxonomy/vocabulary/10	770	10.52 KB	9	28	
/taxonomy/term/41+42+43/0/feed	765	10.66 KB	93	94	
/phppgadmin/display.php	633	77.44 KB	1	8	
/home	493	7.06 KB	33	57	
/consortium	483	12.86 KB	30	98	
/phppgadmin/redirect.php	451	7.49 KB	3	1	
/news	432	11.21 KB	6	16	
/admin/node	432	26.94 KB			
/van/projectinfo	389	11.85 KB	12	28	
/deliverables	385	34.70 KB	24	69	
/objectives	355	9.02 KB	7	34	
/workpackages	351	8.78 KB	5	14	
/spasgroupware/filemanager/index.php	342	95.80 KB		6	
/vangroupware/index.php	329	28.20 KB		2	
/statsvan/awstats.pl	313	32.22 KB	13	11	
/van/taxonomy/vocabulary/10	298	11.74 KB	11	19	
/van/consortium	278	16.43 KB	11	45	
/van/feedback	273	8.08 KB	93	93	
/relatedlinks	259	12.42 KB	18	32	
/publications	258	7.16 KB	13	38	
/taxonomy/term/1	250	13.13 KB	5	18	
/index.php	242	5.45 KB	10	6	
/expresults	241	8.08 KB	8	16	
/admin	238	26.31 KB	1		
/phpgroupware/index.php	235	30.15 KB		2	
/sitemenu	220	7.47 KB	1	3	
/wp1	210	10.29 KB	4	12	
/vanforum/admin/admin_forums.php	208	4.42 KB			
/van/home	198	8.32 KB	17	17	
/contactus	197	6.60 KB	16	26	
/phppgadmin/browser.php	186	18.30 KB		1	
/phppgadmin/topbar.php	182	1.67 KB			

Fig. 4.3 List of more often visited VAN web site sections during year 2006.

According to fig 4.3, during the year 2006 the most visited section was the GroupWare. This just reflects the fact that VAN members were accessing this link daily using it as a tool for exchanging and sharing information while carrying out project tasks. Apart from this and according to the table, the public seems to have been interested in the general information about the project, the home page, the consortium members, news and deliverables.

Pages-URL					
Total: 473 different pages-url	Viewed	Average size	Entry	Exit	
/	2169	6.87 KB	1433	518	
/themes/van-neu/latestnews.htm	1712	1.50 KB	42	688	
/news	798	11.23 KB	32	49	
/deliverables	636	35.36 KB	92	118	
/projectinfo	616	9.54 KB	28	57	
/sites/van/pages/files/D01.1-1-version_1.05.pdf	556	3.90 MB	409	411	
/home	522	7.42 KB	24	34	
/sites/van/pages/files/D081-1.doc	481	2.91 MB	402	400	
/consortium	469	16.34 KB	57	103	
/newstitle	460	6.61 KB	9	16	
/sites/van/pages/files/D04.1-1_FinalV1_2_060702.pdf	404	1.84 MB	311	303	
/publications	334	8.75 KB	9	35	
/relatedlinks	328	15.80 KB	65	63	
/generaldownloads	308	7.84 KB	9	22	
/sites/van/pages/files/D01.3-1-V1_conclusions%20redraft.pdf	289	651.04 KB	222	220	
/vanmeetings	286	10.75 KB	15	12	
/admin/node	229	30.72 KB		2	
/sites/van/pages/files/D01.2-1-V1_conclusions%20redraft.pdf	222	2.26 MB	135	125	
/newsletters	215	8.29 KB	11	10	
/admin	213	25.02 KB			
/sitemenu	211	7.71 KB	8	14	
/taxonomy/term/41+42+43/0/feed	210	10.62 KB	29	40	
/sites/van/pages/files/newsletter170407.pdf	207	1.07 MB	116	121	
/objectives	203	8.83 KB	8	21	
/workpackages	193	8.43 KB	6	9	
/sites/van/pages/files/VAN_introduction_engl.pdf	163	62.63 KB	50	70	
/newmember	159	18.25 KB	22	15	
/feedback	152	7.98 KB	22	25	
/contactus	150	5.88 KB	17	65	
/expresults	150	7.98 KB	3	14	
/sites/van/pages/files/newsletter102006.pdf	119	861.40 KB	45	49	
/organisation	115	10.46 KB	21	14	
/sites/van/pages/files/D07.1-1_v1.2_final.pdf	104	552.05 KB	86	87	
/sites/van/pages/files/D01.3-1-V2.pdf	98	619.35 KB	55	56	
/sites/van/pages/files/D01.2-1-V2.pdf	90	2.69 MB	47	46	
/admin/menu	90	31.86 KB		2	
/sites/van/pages/files/D01.1-1-V2.pdf	86	168.89 KB	31	32	
/node/add/page	86	20.07 KB			
/sites/van/pages/files/D10.1-2-V1.pdf	79	2.70 MB	39	41	
/readmorehannovermesse	75	7.74 KB	3	1	
/node/add	73	6.73 KB			
/admin/taxonomy	70	7.97 KB			

Fig. 4.4 List of more often visited VAN web site sections during year 2007.

Along the current year, some changes have taken place regarding the preferences of the users accessing VAN web site. It is clear that the news section is still the most visited (in particular the latest news). It is followed by the deliverables section. This is reasonable as the number of available public deliverables has increased after being approved in last project review and the public can get closer to VAN results and achievements. The home page, consortium members and publications are also in the interest of users though to a less extent.

The number of users accessing the GroupWare is an indicator of the work load along time. Below there is a bars graph displaying this information since last September 2006 till the present day.

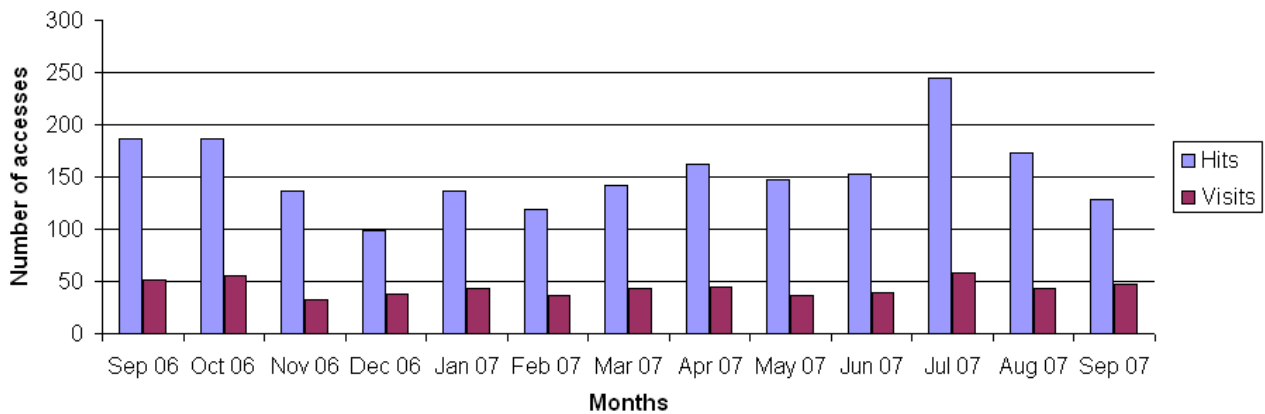


Fig. 4.5 Accesses to the GroupWare.

The most remarkable fact according to fig 4.5 is the Hits peak during July 07. This can be easily explained as a consequence of the great amount of deliverables due in August 07. Besides, the number of Hits is also remarkable during September and October 2006. A reason for this can be the preparation of last year project review.

5 Dissemination plan assessment

Following with the framework presented in the first version of this report (D10.1-2 V1) VAN partners participating in dissemination events have filled in the Dissemination Plan Template [DPT06], giving information on both past and future events for the current reported period.

The indicators chosen give general information on past events and assess the related impact for VAN project interests. For more information on the indicators, their nature and reasons for choosing them, please refer to the previous version of this deliverable (D10.1-2 V2).

The related information collected from VAN partners has been included in Annex I of the current document and is displayed there in several tables. It is also shown below in figures 5.1 to 5.4.

Figure 5.1 shows the participation level of VAN consortium in dissemination events in general terms, that is, without taking into account the different dissemination channels (fairs, congresses, etc.), from March 2006 to August 2007. The related figures can be found in Annex I.

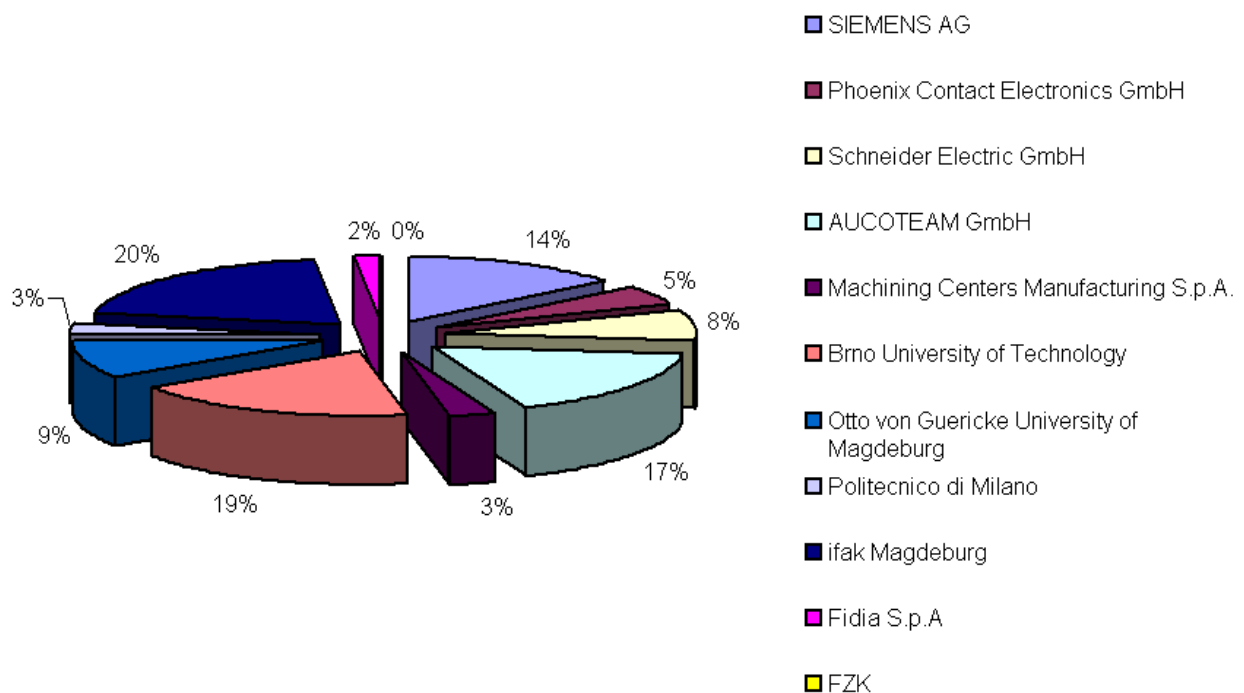


Fig. 5.1 Degree of participation of VAN partners in dissemination events.

Figure 5.2 shows the participation of VAN partners in past and future dissemination events, that is, from September 2006 to August 2008. The different channels (Standardization, Mass Media, etc.) are displayed in different colours inside a unique column for each partner. The related figures can be found in Annex II.

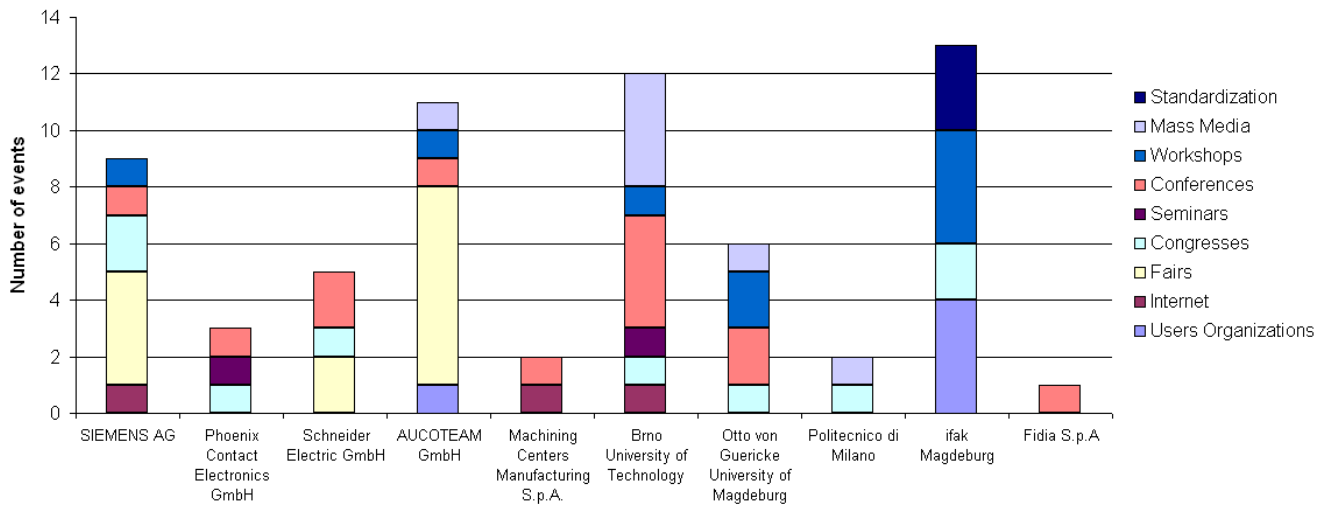


Fig. 5.2 Participation of VAN partners in dissemination events.

Figure 5.3 classifies dissemination contributions in terms of type of audience selected. It is clear that VAN results are very focused on industry. The related figures have been taken from the tables in Annex II.

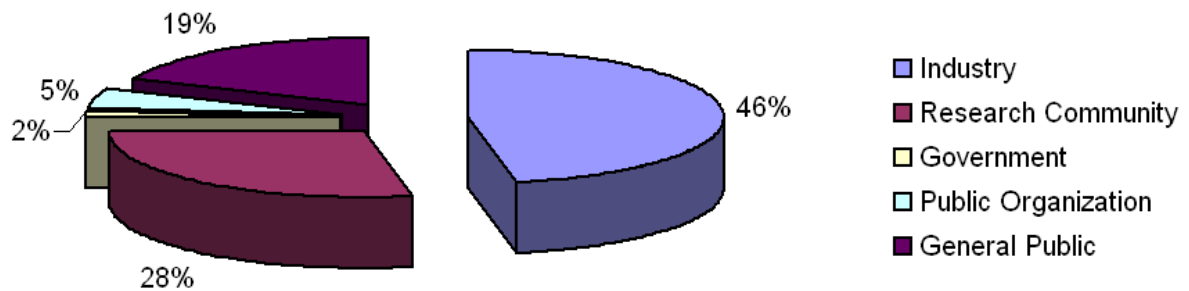


Fig. 5.3 Dissemination contributions in terms of audience.

Table 5.1 shows information related only to past events. In order to assess the impact on the audience, relevant indicators such as the number of interested organizations and the contacts made for future collaborations have been collected for contributions in some remarkable events. The related figures have been taken from the tables in Annex I.

	Interested Organizations	Contacts for future collaboration
SIEMENS AG	22	14
Otto von Guericke. University of Magdeburg	9	5
Aucoteam GmbH	120	5

Table 5.1 Assessment indicators for past contributions in some remarkable events.

6 Conclusions

At this stage of the project, a detailed specification of all technologies, concepts and mechanisms has been fulfilled. WP2 (Open Platform & System) has coordinated the implementation work related to prototypes and demonstrators. These technical achievements have been accordingly accompanied by an important dissemination effort.

VAN ECG has already organized its first workshop (Hanover Fair 2007) and the next one will follow soon (SPS/IPC/Drives 2007). Expert groups of market-relevant user groups from factory and process automation, device and machine suppliers, system integrators and companies, are being aware of the progress achieved by the project.

Though the commonest audience for VAN results is still industry (followed by the research community), efforts are being directed towards reaching a broader public. In this sense, the list of recipients for the newsletter comprises people from different areas. Besides, VAN membership has included a proposition for laymen that has been included in VAN home page. This way, VAN project aims to reach a not so technical audience.

VAN partners continue participating in a number of events considered relevant for the results of the project. First prototypes are being the central instance for these dissemination events.

The web site contents have been updated accordingly and the number of users accessing it has increased along the last year, as there are more contents available and this is shown by the web site indicators (see chapter 4).

Glossary

ANIPLA	Associazione nazionale italiana per l'automazione
API	Application Programming Interface
BIAS	Biennial international exhibition of automation, instrumentation, microelectronics and ict for industry
CeBIT	Centrum der Büro- und Informationstechnik (Centre for office and information technology)
DoW	Description of Work
EC	European Commission
ETFA	Emerging Technologies and Factory Automation
IAONA	Industrial Automation Open Networking Alliance
ICCC	International Carpathian Control Conference
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IFAC	International Federation of Automatic Control
INDIN	International IEEE Conference on Industrial Informatics
IPC	Industrial PC
IPROMS	Intelligent Production Machines and Systems
IT	Information Technology
JTWGs	Joint Technical Working Groups
QoS	Quality of Service
R&D	Research and Development
RT	Real Time
RTD	Research and Technology Development
SPS	Speicherprogrammierbare Steuerung [DE], stands for PLC
TechPCC	Technical Project Coordination Committee
VAN	Virtual Automation Network
VDI	Virtual Device Interface
WG	Working Group
WP	Work Package
ZVEI	German Electrical and Electronic Manufacturers' Association

References

- [DoW07] Description of Work
- [D10.1-2 V1] D10.1-2 V1 Plan for using and disseminating knowledge
- [D10.1-2 V2] D10.1-2 V2 Plan for using and disseminating knowledge
- [D10.3-1 V1] D10.3-1 V1 European Competence Group – Report 1
- [DPT06] Dissemination Plan Template (version 2)

Appendix I: Past events assessment

VAN partners have filled in the Dissemination Plan Template giving information on the assessment of past events. The related results are shown below.

I.1 Hanover Fair

The Hanover Fair (German: Hannover Messe) is the world's biggest industrial fair. It is held on the Hanover fairground in Hanover, Germany. Typically, there are about 6.000 exhibitors and 200.000 visitors.

The Hanover Fair started in 1947 in an undamaged factory building in Laatzen, south of Hanover, by an arrangement of the British military government in order to boost the economical advancement in post-war Germany. The first fair was colloquially known as Fischbrötchenmesse (fish bun fair) due to the exemptions in food rationing for the fair at this time. It proved hugely successful and was hence repeated on a yearly basis, contributing largely to the success of the Hanover fairground in replacing the then-East German city of Leipzig as the new major fair city for West Germany.

In the 1980s, growing information and telecommunication industry forced the organiser Deutsche Messe AG to split the fair. The CeBIT is a successful spin-off of the Hanover Fair.

Nowadays, the Hanover Fair centers on robotics.

Partner	Contribution	Target audience
SIEMENS AG	VAN project presentation at Networking Lounge and European Competence Group Meeting #1	Industry
Assessment indicators		
Number of participants		30
Interested organizations		6
Contacts made for possible future collaboration		6
Web site impact		
Scope		International

Table I.1 Assessment indicators for Hanover Fair (Factory Automation), contribution from SIEMENS.

Partner	Contribution	Target audience
Aucoteam GmbH	Cooperation of public and private networks for the control of bio power plants	Industry
Assessment indicators		
Number of participants		
Interested organizations		120
Contacts made for possible future collaboration		15
Web site impact		
Scope		International

Table I.2 Assessment indicators for Hanover Fair (Factory Automation), contribution from Aucoteam GmbH.

I.2 ZVEI GA KA (Communication Committee of ZVEI)

The 'ZVEI - Zentralverband Elektrotechnik- und Elektronikindustrie e.V.', the German Electrical and Electronic Manufacturers' Association, represents the economic, technological and environmental policy interests of the German electrical and electronics industry at the national, European and international levels. It provides specific information about the economic, technical and regulatory framework conditions of the electrical industry in Germany.

The ZVEI promotes the development and use of innovative technologies by proposals concerning research, technological, environmental protection, educational and scientific policy. It supports market-orientated European and international standards-making activities.

Partner	Contribution	Target audience
SIEMENS AG	VAN Project Presentation	Industry
Assessment indicators		
Number of participants		15
Interested organizations		4
Contacts made for possible future collaboration		1
Web site impact		-
Scope		National

Table I.3 Assessment indicators for ZVEI GA KA, contribution from SIEMENS.

I.3 IAONA Joint Technical Working Groups (JTWGs)

To cope with the new tasks of an umbrella organisation, the JTWGs have been established as continuation of the former work groups. Remarkable for the JTWGs is especially the collaboration regarding the technical aspects of Ethernet which embraces all partner organisations. Also IAONA invites all interested external experts to co-operate and work within these groups. The practical work of the JTWGs is done by usage of the latest internet technologies, thus a physical presence of the experts is not obligatory.

Partner	Contribution (System aspects)	Target audience
Otto von Guericke University of Magdeburg	Close cooperation, mutual input	Industry
Assessment indicators		
Number of participants		6
Interested organizations		4
Contacts made for possible future collaboration		-
Web site impact		2 visits
Scope		International

Table I.4 Assessment indicators for IAONA JTWGs, contribution from Otto von Guericke University of Magdeburg (I).

Partner	Contribution (Security)	Target audience
Otto von Guericke University of Magdeburg	Close cooperation, mutual input	Industry
Assessment indicators		
Number of participants		5
Interested organizations		5
Contacts made for possible future collaboration		-
Web site impact		3 visits
Scope		International

Table I.5 Assessment indicators for IAONA JTWGs, contribution from Otto von Guericke University of Magdeburg (II).

I.4 IEEE International Conference on Emerging Technologies and Factory Automation (ETFA 2006)

The ETFA conference series is the prime, and largest, IEEE event dedicated to factory automation and emerging technologies in industrial automation.

Since 1992, the ETFA conference has been hosted by some of the leading academic and research establishments including University of Tokyo (Tokyo, Japan), INRIA (Paris, France), University of Hawaii (Hawaii), University of California at Los Angeles, Polytechnic University of Catalonia (Barcelona, Spain), Université de Nice Sophia-Antipolis (Nice, France), Universidade Nova de Lisboa-FCT-DEE (Lisbon, Portugal) and University of Catania. This time, the ETFA conference has been hosted by Czech Technical University in Prague (CTU).

The aim of the conference is to bring together researchers and practitioners from the industry and academia and provide them with a platform to report on recent advances and developments in the newly emerging areas of technology, as well as actual and potential applications to industrial and factory automation.

Partner	Contribution	Target audience
Schneider Electric GmbH	Invited speaker	
Assessment indicators		
Number of participants		300
Interested organizations		-
Contacts made for possible future collaboration		-
Web site impact		-
Scope		International

Table I.6 Assessment indicators for ETFA 2006, contribution from Schneider Electric GmbH.

I.5 International Congress ANIPLA 2006 "METHODOLOGIES FOR EMERGING TECHNOLOGIES IN AUTOMATION"

Partner	Contribution	Target audience
SIEMENS AG	VAN Paper presentation	Research Community
Assessment indicators		
Number of participants		50
Interested organizations		2
Contacts made for possible future collaboration		5
Web site impact		
Scope		International

Table I.7 Assessment indicators for ANIPLA 2006, contribution from SIEMENS AG.

I.6 WAMS 2007. 1st International Workshop on Advanced Manufacturing Systems

This international workshop has been supported by the European research project "PABADIS based Product Oriented Manufacturing Systems for Reconfigurable Enterprises", and organized by the University of Magdeburg, the 1st of June 2007. (Check http://www.uni-magdeburg.de/iaf/cvs/pabadispromise/Proceedings_WAMS2007.pdf for more information on this event).

Partner	Contribution	Target audience
SIEMENS AG	Quality of Service Measurement in Virtual Automation Networks	Research Community
Assessment indicators		
Number of participants		30
Interested organizations		10
Contacts made for possible future collaboration		2
Web site impact		
Scope		International

Table I.8 Assessment indicators for WAMS 2007, contribution from SIEMENS AG.

Appendix II: Dissemination events

Detailed information regarding the past and future dissemination events from chapters 2 and 3 is included below.

The degree of importance of each contribution ranges from 1 to 5, being 1 the mark for the least important and 5 the one for the most important. It has been assessed by the author and reflects the relevance of the contribution for VAN project in terms of indicators such as: number of people addressed, target audience and its significance for the project, policies addressed, etc.

International Conferences

Contribution:	Virtual Automation Networks (VAN)
Author:	Otto von Guericke University of Magdeburg
Event:	Marcus evens, Flexibility and IT-security in Automation with Ethernet
Date:	18 th -19 th September 2006
Venue:	Düsseldorf, Germany
Target audience:	Industry
Degree of importance:	5

Contribution:	Recent Development in Industrial Communication Systems Standardization
Author:	Brno University of Technology
Event:	ICCC 2007. 8 th International Carpatian Control Conference
Date:	24 th –27 th May, 2007
Venue:	Slovakia
Target audience:	Research Community
Motivation:	Bring the notion of the VAN Project into research community
Degree of importance:	4

Contribution:	Evaluation of Indoor Wireless Communication for Sensor Networks
Author:	Brno University of Technology
Event:	16 th International Conference on Process Control
Date:	June 2007
Venue:	Slovakia
Target audience:	Research Community
Motivation:	Bring the notion of the capabilities of wireless sensor networks in indoor automation scenarios

Degree of importance:	2
Contribution:	Design of wide area wireless monitoring system
Author:	Brno University of Technology
Event:	16 th International Conference on Process Control
Date:	June 2007
Venue:	Slovakia
Target audience:	Research Community
Motivation:	Bring the notion of the capabilities of wireless sensor networks
Degree of importance:	2

Contribution:	Virtual Automation Networks
Author:	Fidia S.p.A
Event:	I*PROMS 2007. Innovative Production Machines and Systems Virtual Conference
Date:	2 nd –13 th July 2007

Contribution:	Virtual Automation Networks
Author:	Machining Centers Manufacturing S.P.A.
Event:	I*PROMS 2007. Innovative Production Machines and Systems Virtual Conference
Date:	2 nd –13 th July 2007

Contribution:	WirVAN: Wireless in Virtual Automation Networks
Author:	Brno University of Technology
Event:	IEEE Fourth International Conference on Wireless and Optical Communications Networks (WOCN 2007)
Date:	2 nd – 4 th July 2007
Venue:	Singapore
Target audience:	Research Community
Motivation:	Bring the notion of the VAN Project into research community
Degree of importance:	3

Contribution:	VAN project presentation
Author:	Aucoteam GmbH
Event:	International conference "Micro Nano Reliability 2007"
Date:	2 nd September 2007
Venue:	Fraunhofer Institut IZM Berlin, Germany
Target audience:	Research community

Motivation:	Dissemination of VAN idea in the international research community. Acquisition of international co-operation partners for further development of VAN solutions.
Degree of importance:	4

Contribution:	VAN approaches for safety over public networks
Author:	Phoenix Contact Electronics GmbH
Event:	Fachsymposium "sichere Feldbusse" BGIA/BGFE
Date:	11 th September 2007
Venue:	Dresden, Germany
Target audience:	General Public
Degree of importance:	3

Contribution:	Uniform Engineering of Distributed Control Systems – The VAN Approach
Author:	Otto von Guericke University of Magdeburg
Event:	ETFA 2007
Date:	25 th – 28 th September 2007
Venue:	Patras, Greece
Target audience:	Research Community
Motivation:	Promote VAN results
Degree of importance:	4

Contribution:	Uniform Engineering of Distributed Control Systems – The VAN Approach
Author:	SIEMENS AG
Event:	ETFA 2007 - IEEE International Conference on Emerging Technologies and Factory Automation
Date:	25 th -28 th September 2007
Venue:	Patras, Greece
Target audience:	Research Community
Degree of importance:	3

Contribution:	Special Session organization
Author:	Schneider Electric GmbH
Event:	6 th International IEEE Conference on Industrial Informatics (INDIN 2008)
Date:	13 th – 16 th July, 2008
Venue:	Daejeon, Korea
Target audience:	Industry

Degree of importance:	2
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Contribution:	Presentation about VAN WP8 results
Author:	Schneider Electric GmbH
Event:	4 th . I*PROMS Virtual International Conference on Intelligent Production Machines and Systems
Date:	July, 2008
Venue:	Cardiff, UK (virtual)
Target audience:	Industry
Degree of importance:	3

Workshops

Author:	Ifak Magdeburg
Event:	Coexistence guideline
Date:	8 th – 9 th May 2007
Venue:	Bexbach
Target audience:	Industry

Author:	Ifak Magdeburg
Event:	ZVEI Workshop “Wireless” and “Energymanagement” with press team
Date:	15 th May 2007
Venue:	Frankfurt
Target audience:	Public Organizations

Author:	Ifak Magdeburg
Event:	System integration aspects
Date:	30 th – 31 st May 2007
Venue:	s'Hertogenbosch
Target audience:	Industry

Contribution:	Quality of Service Measurement in Virtual Automation Networks
Author:	SIEMENS AG
Event:	WAMS 2007 - International Workshop on Advanced Manufacturing Systems
Date:	1 st June 2007
Venue:	Magdeburg, Germany
Target audience:	Research community
Degree of importance:	4

Contribution:	Quality of Service Measurement in Virtual Automation Networks
Author:	Otto von Guericke University of Magdeburg
Event:	WAMS 2007 - International Workshop on Advanced Manufacturing Systems
Date:	1 st June 2007
Venue:	Magdeburg, Germany
Target audience:	Research community
Motivation	Promote VAN results and interrelation between different projects
Degree of importance:	4

Contribution:	Internet technologies for automation (In Czech: Internetové technologie pro automatizaci)
Author:	Brno University of Technology
Event:	Electronic development and production in the Czech Republic (in Czech)
Date:	21 st July
Venue:	Brno, Czech Republic
Target audience:	Industry
Motivation	Bring the notion of the VAN Project into the local industry
Degree of importance:	3

Contribution:	Presentation of VAN / Security in Virtual Automation Networks
Author:	Otto von Guericke University of Magdeburg
Event:	Netzwerksicherheit in der Automatisierungstechnik
Date:	31 st August 2007
Venue:	Magdeburg, Germany
Target audience:	Research Community
Motivation:	Promote VAN results and cooperation with other projects
Degree of importance:	5

Contribution:	Preparation and execution; TU Berlin
Author:	Aucoteam GmbH
Event:	Professional training course "How Virtual Automation Networks improve process control solutions"
Date:	1 st September 2007
Venue:	Berlin, Germany
Target audience:	Research community
Motivation:	Dissemination of VAN idea and of the VAN based enhancements for scientists and junior employees/students
Degree of importance:	4

Author:	Ifak Magdeburg
Event:	Ethernet Fieldbus RT-Performance discussion
Date:	12 th September 2007
Venue:	Berlin
Target audience:	Research Community

Standardization

Contribution:	Information about VAN activities
Author:	Ifak Magdeburg
Event:	IEC TC65 "Industrial Measurement And Control" SC65C "Digital Communications" MT9 Meeting
Date:	18 th September 2006
Venue:	Berlin, Germany
Target audience:	Public organizations
Degree of importance:	4

Contribution:	Wireless Coexistence
Author:	Ifak Magdeburg
Event:	ISA SP100 Meeting
Date:	19 th -20 th March, 2007
Venue:	Hannover, Karlsruhe
Target audience:	Industry
Degree of importance:	4

Author:	Ifak Magdeburg
Event:	IC61158 integration aspects for process industry
Date:	24 th – 26 th June 2007
Venue:	Reinach
Target audience:	Industry

Mass Media

Contribution:	Transformation of communication in automation (In Czech:Promeny prumyslove komunikace)
Author:	Brno University of Technology
Event:	Automation, Control and Processes (In czech:Automatizace, regulace, procesy- ARaP)
Date:	November, 2006
Venue:	Czech Republic
Target audience:	General Public
Motivation:	Bring the notion of the VAN Project into automation community
Degree of importance:	3

Contribution:	Industrial Ethernet – serial
Author:	Brno University of Technology
Event:	AUTOMA 2006
Date:	2006
Venue:	Czech Republic
Target audience:	General Public
Motivation:	Bring the notion of the VAN Project into research community.
Degree of importance:	4

Contribution:	Virtual Automation Networks – Developing the Future of Industrial Communication; 3 page article
Author:	Otto von Guericke University of Magdeburg
Event:	Praxis Profiline
Date:	1 st April 2007
Venue:	Germany
Target audience:	General Public
Motivation:	Promote VAN concept for public and professionals

Contribution:	Preparation; distribution in Germany
Author:	Aucoteam GmbH
Event:	VAN publications in professional journals, like "atp - Automatisierungstechnische Praxis" (Oldenbourg Verlagsgruppe)
Date:	1 st May 2007
Venue:	Berlin, Germany

Target audience:	Industry
Motivation:	Dissemination of VAN enhancements in the national industries.
Degree of importance:	4

Contribution:	Survey on "safety profiles for real-time ethernet-based automation networks"
Author:	Politecnico di Milano
Event:	ISA/O3neida (book)
Date:	End of 2007
Target audience:	General Public
Degree of importance:	3

Contribution:	Industrial Ethernet - continuation of series from 2006
Author:	Brno University of Technology
Event:	AUTOMA 2007
Date:	2007
Venue:	Czech Republic
Target audience:	General Public
Motivation:	Bring the notion of the VAN Project into automation community
Degree of importance:	4

Contribution:	Interview on VAN project, its intended outcomes and contributions to industrial automation
Author:	Brno University of Technology
Event:	Interview for local newspaper
Date:	2007
Venue:	Czech Republic
Target audience:	General Public
Motivation:	Bring the notion of the VAN Project and EU funded research project into general public
Degree of importance:	2

Internet

Contribution:	Banner with link to VAN project Websites
Author:	SIEMENS AG
Event:	Banner on SIMATIC NET Homepage
Date:	April 2006...September 2006
Target audience:	Industry
Degree of importance:	2

Contribution:	Basic introduction to VAN at our homepage with link to www.van-eu.eu
Author:	Brno University of Technology
Event:	Web Page
Date:	1 st December 2006
Target audience:	General public
Motivation:	Bring the notion of the VAN Project into research community
Degree of importance:	4

Contribution:	Reference to VAN project home page
Author:	Machining Centers Manufacturing S.P.A.
Event:	MCM Web page
Target audience:	General public
Degree of importance:	1
Motivation	This page show R&D strategy of MCM and start showing potential exploitation for VAN results.

Seminar

Contribution:	Introduction of the VAN ideas in a subject "Industrial Automation" guaranteed by Prof. Frantisek Zezulka
Author:	Brno University of Technology
Event:	Lectures for MSc students
Date:	2007
Target audience:	Research Community
Motivation:	Bring the notion of the VAN Project into research community
Degree of importance:	4

Contribution:	VAN approaches for safety over public networks
Author:	Phoenix Contact Electronics GmbH

Event:	Fachbereichskolloquium "Sichere Netzwerke"
Date:	30 th May 2007
Venue:	Lemgo, Germany
Target audience:	Research Community
Degree of importance:	4

Fairs

Contribution:	VAN-based control system in the process industry
Author:	Aucoteam GmbH
Event:	Hanover Fair 2006
Date:	14 th April 2006
Venue:	Hanover, Germany
Target audience:	Industry
Degree of importance:	5
Motivation	Give an overview on the possibility to use VAN-components

Contribution:	VAN project presentation on slides
Author:	SIEMENS AG
Event:	BIAS. 32 nd Biennial international exhibition of automation, instrumentation, microelectronics and ict for industry
Date:	20 th -23 rd September 2006
Venue:	Fiera Milano RHO-pero new exhibition centre
Target audience:	Industry
Degree of importance:	3

Contribution:	VAN presentation at Networking Lounge
Author:	SIEMENS AG
Event:	SPS/IPC/Drives 2006
Date:	20 th -30 th November-2006
Venue:	Nuremberg, Germany
Target audience:	Industry
Degree of importance:	3

Contribution:	"Engineering von Automatisierungs- und Antriebsanlagen" (Session Chair)
Author:	Schneider Electric GmbH
Event:	SPS IPC Drives 2006

Date:	28 th November 2006
Venue:	Nuremberg, Germany
Target audience:	Industry
Degree of importance:	3

Contribution:	Exhibitor; presentation and discussion of "VAN objectives, aims and solutions"
Author:	Aucoteam GmbH
Event:	Hanover Fair 2007
Date:	14 th April 2007
Venue:	Hanover, Germany
Target audience:	Industry
Degree of importance:	4
Motivation	Dissemination of VAN idea and business development

Contribution:	VAN project presentation at Networking Lounge and European Competence Group Meeting #1
Author:	SIEMENS AG
Event:	Hanover Fair 2007 (Factory Automation)
Date:	14 th April 2007
Venue:	Hanover, Germany
Target audience:	Industry
Degree of importance:	3

Contribution:	"Uniform Engineering of heterogeneous Networks and Distributed Automation System"
Author:	Schneider Electric GmbH
Event:	Hannover Fair, VAN European Competence Group
Date:	18 th April 2007
Venue:	Hanover, Germany
Target audience:	Industry
Degree of importance:	3

Contribution:	Cooperation of public and private networks for the control of bio power plants
Author:	Aucoteam GmbH
Event:	Hanover Fair 2007
Date:	25 th April 2007
Venue:	Hanover, Germany

Target audience:	Industry
Degree of importance:	5
Motivation	Give a special VAN-solution for the bio power plants

Contribution:	Hierarchical control systems for bio power plants
Author:	Aucoteam GmbH
Event:	SPS & Drives Fair 2007
Date:	15 th November 2007
Venue:	Nuremberg, Germany
Target audience:	Industry
Degree of importance:	4
Motivation	Give an overview on VAN-based control systems for bio power plants

Contribution:	VAN Presentation and European Competence Group Meeting #2
Author:	SIEMENS AG
Event:	SPS/IPC/Drives 2007
Date:	27 th – 29 th November 2007
Venue:	Nuremberg, Germany
Target audience:	Research Community
Degree of importance:	3

Contribution:	VAN-based sensor / actuator networks
Author:	Aucoteam GmbH
Event:	Sensor + Test
Date:	15 th May 2008
Venue:	Munich, Germany
Target audience:	Industry
Degree of importance:	4

Contribution:	Using public network for monitoring and control
Author:	Aucoteam GmbH
Event:	Innotrans
Date:	23 rd September 2008
Venue:	Berlin, Germany
Target audience:	Industry
Motivation	Give an overview on using public networks for monitoring and control in the process industry

Contribution:	Security solutions for control systems
Author:	Aucoteam GmbH
Event:	SPS & Drives Fair 2007
Date:	25 th November 2007
Venue:	Nuremberg, Germany
Target audience:	Industry
Degree of importance:	5
Motivation	Give information's on security solutions, acquisition

User Organizations

Contribution:	Report on VAN Objectives and Aims
Author:	Ifak Magdeburg
Event:	GMA permanent working group FA 5.21 "Radio Based Communication" within the German VDI/VDE-Gesellschaft
Date:	5 th September 2006
Venue:	Frankfurt, Germany
Target audience:	Industry
Degree of importance:	2

Contribution:	VAN wireless integration approach
Author:	Ifak Magdeburg
Event:	User Forum
Date:	17 th October 2006
Venue:	Potsdam
Target audience:	Public Organizations

Contribution:	Preparation and printing; distribution in Germany/Berlin and Brandenburg
Author:	Aucoteam GmbH
Event:	Information brochure "Virtual Automation Networks in the process industry"
Date:	1 st April 2007
Venue:	Berlin, Germany
Target audience:	Industry
Degree of importance:	4
Motivation	Dissemination of VAN enhancements in the national industries.

Author:	Ifak Magdeburg
Event:	PI WG12, Wireless integration, Wireless Sensor/Actor networks

Date:	4 th June 2007
Venue:	Frankfurt
Target audience:	Industry

Contribution:	Wireless integration aspects
Author:	Ifak Magdeburg
Event:	PI WSAN Meeting
Date:	9 th – 10 th July 2007
Venue:	Esslingen
Target audience:	Industry

Congresses

Contribution:	VAN Project Presentation
Author:	SIEMENS AG
Event:	ZVEI GA KA (Communication Committee of ZVEI)
Date:	September-2006
Target audience:	Industry
Degree of importance:	1

Contribution:	Invited panel speaker
Author:	Schneider Electric GmbH
Event:	IEEE International Conference on Emerging Technologies and Factory Automation (ETFA 2006)
Venue	Prague, Czech Republic
Date:	1 st September 2006
Degree of importance:	1

Contribution:	Analysis of Ethernet-based safe automation networks according to IEC 61508
Author:	Politecnico di Milano
Event:	IEEE International Conference on Emerging Technologies and Factory Automation (ETFA 2006)
Venue	Prague, Czech Republic
Date:	1 st September 2006

Contribution:	VAN project overview presentation and first results
Author:	Phoenix Contact Electronics GmbH
Event:	Industrial Communication Congress
Date:	19 th September 06

Venue:	Blomberg, Germany
Target audience:	Industry
Degree of importance:	3

Contribution:	Presentation "Application Scenarios for ZigBee in industrial Applications"
Author:	Ifak Magdeburg
Event:	Wireless Technologies Congress
Date:	28 th September 2006
Venue:	Dortmund, Germany
Target audience:	General Public
Degree of importance:	3

Contribution:	VAN Paper Presentation
Author:	SIEMENS AG
Event:	International Congress ANIPLA 2006
Date:	13 th -15 th -November-2006
Venue:	Rome, Italy
Target audience:	Research Community
Degree of importance:	4

Contribution:	Horizontal and Vertical Integration for Automation Systems – Virtual Automation Networks
Author:	Otto von Guericke University of Magdeburg
Event:	Anipla 2006, METHODOLOGIES FOR EMERGING TECHNOLOGIES IN AUTOMATION
Date:	13 th -15 th -November-2006
Venue:	Rome, Italy
Target audience:	Research Community
Degree of importance:	5
Motivation	Promote VAN results within automation research

Contribution:	Poster presentation. Presentation of a paper on the basic VAN infrastructure. Organisation of a ARG meeting
Author:	Politecnico di Milano
Event:	ANIPLA International Congress "Methodologies for Emerging Technologies in Automation"
Date:	13 th -15 th -November-2006
Venue:	Rome, Italy
Target audience:	Industry

Degree of importance:	4
Motivation	Interaction with Italian market and complementary researcher with respect to other congresses. ARG meeting

Contribution:	Kenn- und Einflussgrößen zur Bewertung von Funklösungen für die industrielle Automation
Author:	Ifak Magdeburg
Event:	GMA Congress ZVEI, Expert Consortium Wireless
Date:	11 th – 14 th June 2007
Venue:	Baden-Baden, Frankfurt
Target audience:	Industry

Contribution:	Presentation of a VAN Demonstrator
Author:	Otto von Guericke University of Magdeburg
Event:	ITEA 2 Symposium 2007
Date:	18 th – 19 th October, 2007
Venue:	Berliner Congress Center, Berlin, Germany
Target audience:	Government
Degree of importance:	4
Motivation	Promote and present VAN results

Contribution¹:	Invited Session Proposal for IFAC World Congress 2008: "Virtual Automation Networks"
Author:	Ifak Magdeburg
Event:	IFAC World Congress 2008
Date:	6 th – 11 th July 2008
Venue:	Convention and Exhibition Center (COEX), Seoul

Contribution:	Submitted paper: QoS Test Bed for Evaluation of Real-Time Behaviour of Network Components
Author:	Brno University of Technology
Event:	17 th IFAC Congress
Date:	July 2008
Venue:	Korea
Target audience:	Research Community
Degree of importance:	4

¹ Currently under evaluation