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***Virtual Automation Networks***

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**Exploitation and Dissemination**

Task 10.1  
**Information Dissemination**

Deliverable 10.1-2-V4  
**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 fourth version of this deliverable and presents the dissemination activities carried out by VAN partners from September 2007 to August 2008, 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 appendixes. The first chapter is an introduction including the latest VAN vision for laymen. The second chapter includes accomplished dissemination actions from September 2007, 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 [DoW08] because the following ones will be approved at the next project review (November 2008). 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 appendixes 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

All along the first two periods of VAN project, WP1 (Requirements and Trend screening) has been the basis for the rest of technical work packages. During the third year WP1 has been performing a thorough trend screening of VAN relevant technologies with a twofold target. First, keep a close look at the latest developments and solutions and include them into the VAN implementation. And second, support risk analysis with respect to competing solutions.

So far, WP2 (Open Platform & System Architecture) has been the basis for the coordination of implementation work (prototypes and IES – industrial experimental setups). Moreover, it has been supporting the integration of all other WPs in the VAN platform. During the third period, this has also been handled by WP9 (Validation and Test), under the supervision of the Technical Project Coordination Committee (TechPCC).

Developed solutions coming from WP2-WP8 will be implemented in industrial experimental setups (IESs), on the one hand in the specific WP (e.g. prototype for the Real-Time solution in WP4) and on the other hand in an integrated IES covering factory and process automation. The VAN consortium will provide two IESs. These are: the manifold production system, expectedly a common IES with the EC STREP PABADIS’PROMISE, and a biogas power plant.

All these achievements are being shown to the public in a regular basis through the adequate channels. VAN partners are taking advantage of all the available dissemination tools and are participating actively in events of every kind (conferences, congresses, workshops, etc). These are being punctually announced through VAN website ([www.van-eu.eu](http://www.van-eu.eu)) and the generated material can be accessed through it.

## 1.1 VAN vision for laymen

A new VAN vision for laymen has been produced on the third period of the project. This time, Process Automation is the chosen framework. It is shown below and also available at VAN website ([http://www.van-eu.eu/sites/van/pages/files/VAN\\_Use\\_Case\\_for\\_Process\\_Automation.pdf](http://www.van-eu.eu/sites/van/pages/files/VAN_Use_Case_for_Process_Automation.pdf)).

“For several decades now fossil sources have been helping us to enjoy a comfortable situation that could not always be taken for granted during the history of man and which even nowadays cannot be assumed to be a common good in all countries all over the world.

In the future the situation will change; due to their CO<sub>2</sub> production, fossil energy sources are understood to increase global warming and, as a result, seem to change our climate dramatically. Moreover, black coal, brown coal, turf, oil and gas will be more and more expensive in the future as more and more people expect to cover their demand.

Against this background, renewable energy sources come to the fore and tend to be used more and more commonly: photo-voltaic systems, biomass power and fuel generation, small wind power plants, as well as wind parks nowadays significantly support the power production. In this context, not only the source of energy changes, but the character of the corresponding power plants is also quite different. Many renewable energy generators are much smaller generation units than modern fossil power plants and they are often widely distributed all over the country, e.g. a 1GW power plant must be replaced by 100.000 10kW photo-voltaic systems on top of a house.

But how to control the huge amount of small power generation units and care for load balancing issues?

Big power plants and their power transmission lines have dedicated control and communication mechanisms, but small units cannot afford such an effort. Monitoring, control, automation, and protection within a park of distributed power generators and consumers, using an appropriate and

flexible communication infrastructure, is one of the future challenges in this picture. Since a short time ago the term “smart power grid” is being used to describe a corresponding set up. A smart power grid may best be defined as using communications and modern computing to upgrade the current electric power grid, so that it can operate more efficiently, reliably and safely. Such an upgrade is equivalent to bringing the power of the Internet to the transmission, distribution and use of electricity - it will save consumers money and reduce CO2 emissions.

Against this background VAN is developing a universal networking solution 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.

The integration of VAN with the power grid in order to create an electricity communications superhighway capable of monitoring its own health at all times, alerting officials immediately when problems arise and automatically taking corrective actions enable the grid to fail gracefully and prevent a local failure from cascading out of control.”

## 2 Accomplished dissemination

### 2.1 Past events

There follows a list with the most remarkable events VAN partners have attended from months 25 to 36, that is, from September 2007 to August 2008.

Short name	Full name	Date
MicroNanoReliability 2007	1 <sup>st</sup> International Conference on Microreliability and Nanoreliability in Key Technology Applications	Sep, 2007
ETFA 2007	12 <sup>th</sup> IEEE Conference on Emerging Technologies and Factory Automation	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
FET 2007	7 <sup>th</sup> IFAC International Conference on Fieldbuses and Networks in Industrial and Embedded Systems	Nov, 2007
	6. Tag der Automation und Robotik	Feb, 2008
	VDMA Ethernet Tag	March, 2008
INDUSTRIE PARIS 2008	INDUSTRIE PARIS 2008	April, 2008
ICONS 2008	3 <sup>rd</sup> IEEE International Conference on Systems	April, 2008
Hanover Fair 2008	Hanover Fair Industry 2008	April, 2008
SAK 2008	Siemens Automatisierungs-Kreis 2008	April, 2008
ICCC 2008	9 <sup>th</sup> International Carpathian Control Conference	May, 2008
Sensor + Test	Sensor + Test	May, 2008
AUTOMATION 2008	AUTOMATION 2008	June, 2008
ICE 2008	International Conference on Concurrent Enterprising	June, 2008
	Computer & Automation	July, 2008
IFAC 08	17 <sup>th</sup> IFAC World Congress	July, 2008

Table 2.1 Accomplished dissemination events.

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

Special mention deserves the ITEA 2 Symposium and the 17<sup>th</sup> IFAC World Congress. They are explained in more detail in the next subsections.

### 2.1.1 ITEA 2 Symposium

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. Among some others, the IP VAN was chosen this time to take part at the ITEA 2 event.

A VAN demonstrator system consisting of several IPCs and PCs showed parts of the latest developments of the project.

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

More related information can be found at <http://www.van-eu.eu/readmoreITEA2>.

### 2.1.2 17<sup>th</sup> IFAC World Congress

Prof. Dr. Peter Neumann, from ifak Institut für Automation und Kommunikation Magdeburg organized the Industrial Session "Virtual Automation Networks" within this congress.

The session dealt with recent activities in Virtual Automation Networks, i.e. WANs, Ethernet-based Industrial Communication Systems, wireless Sensor/Actuator Networks and their integrational view. Furthermore, the migration concepts for Fieldbus Systems (or Sensor/Actuator Networks) and Ethernet-based Systems, for WAN and LAN were shown. Additionally, all important requirements for industrial communications (e.g. safety, security, real-time behaviour, engineering) were of interest.

VAN project partners contributed several papers:

**Title:** "Architectural Concept of Virtual Automation Networks".

**Authors:** P. Neumann, A. Poeschmann, R. Messerschmidt (Institut f. Automation und Kommunikation Magdeburg).

**Title:** "Public network and telecontrol concepts in Virtual Automation Networks".

**Authors:** D. Balzer (Aucoteam GmbH), T. Werner, R. Messerschmidt (Institut f. Automation und Kommunikation Magdeburg).

**Title:** "Evaluation of Real-Time Behaviour in Virtual Automation Networks".

**Authors:** J. Beran, F. Zezulka (Brno University of Technology).

**Title:** "Wireless network integration into Virtual Automation Networks".

**Author:** L. Rauchhaupt (Institut f. Automation und Kommunikation Magdeburg), V. Lakkundi (Brno University of Technology).

**Title:** "Secure Virtual Automation Networks based on a Generic Procedure Model".

**Authors:** M. Wolframm (Teleport Sachsen-Anhalt,.) and H. Adamcyk (Institut f. Automation und Kommunikation Magdeburg).

**Title:** "Engineering Concept for Virtual Automation Networks".

**Authors:** C. Diedrich (Univ. of Magdeburg, Institute of Control System) and H. Hengster (Schneider Electric GmbH), M. Hoffmann (Otto von Guericke University of Magdeburg).

### 2.1.3 Other remarkable publications

- Industrial Ethernet VIII. Principles and features of selected industrial Ethernets. O. Hyncica. AUTOMA. March 2008. Vol XIV. Issue 3
- Industrial Ethernet - Serial, Part 7. F. Zezulka, O. Hyncica. AUTOMA. 10 April 2008, Issue 4, Pages: 2-6

Computer & Automation (German journal): 4 articles on VAN results starting from March 2008.

1. Die VAN-Konzepte. Topologie und Systemarchitektur Neumann, ifak
2. Sicherheitskonzept bei VAN (Safety und Security) Adamczyk, ifak
3. Telecontrol mit VAN. Werner, ifak
4. Das Engineering-Konzept, Schneider et al.

## 2.2 Deliverables

During the third year of the project, developments have been achieved towards dedicated solutions that implement the functions, specified during the previous periods, into industry proven hardware and software modules. Prototypes can now be integrated into different kinds of automation equipment. That is to say, they can now be implemented portably to be used on several different platforms and shall be optimised to different industrial requirements.

Main outcomes are:

- Prototype systems for wireless, real-time mechanisms in embedded devices, safety devices and security applications, as well in process industry as in manufacturing; delivered in hard- and software, accompanied by a short description of each implementation.
- Take-up concept for SMEs inside and outside the consortium.
- Standardisation input to expert groups of market-relevant user groups, e.g. Profibus International.
- Prototype implementations and VAN presentations at fairs/exhibitions, e.g. ITEA 2 Event, SPS/IPC/Drives Fair, Hanover Fair, e.g. Profinet Safety, Wireless Profinet components.

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

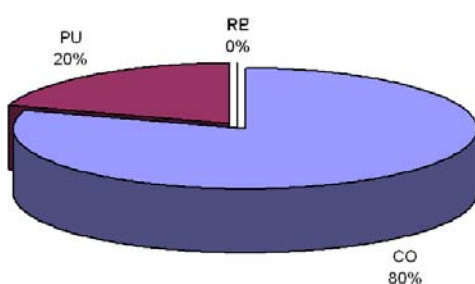


Fig. 2.1 Deliverables achieved from September 2007 to August 2008, classified by type.

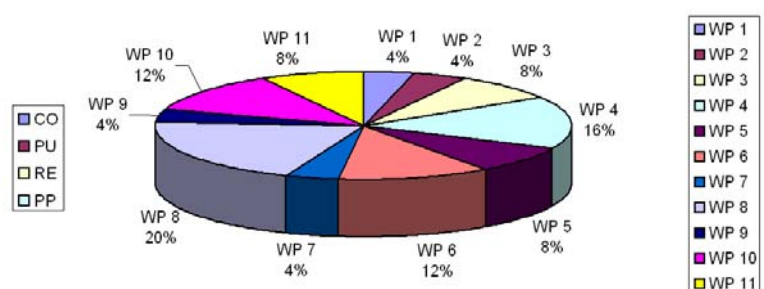


Fig. 2.2 Deliverables achieved from September 2007 to August 2008, classified by work package.

	Year 2007				Year 2008							
	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
<b>WP1</b>												
<b>T1.3</b>												D01.3-1 V4
<b>WP2</b>												
<b>T2.4</b>						D02.4-1						
<b>WP3</b>												
<b>T3.4</b>								D03.4-2				
<b>T3.5</b>										D03.5-1		
<b>WP4</b>												
<b>T4.4</b>	D04.4-1 (p1)					D04.4-1 (p2 )					D04.4-1	
<b>T4.5</b>												D04.5-1
<b>WP5</b>												
<b>T5.4</b>												D05.4-1
<b>T5.5</b>			D05.5-1									
<b>WP6</b>												
<b>T6.3</b>						D06.3-1						
<b>T6.4</b>										D06.4-1		
<b>T6.5</b>												D06.5-1
<b>WP7</b>												
<b>T7.3</b>										D07.3-1		
<b>WP8</b>												
<b>T8.4</b>		D08.4-2										
<b>T8.5</b>								D08.5-1				D08.5-2
<b>T8.6</b>								D08.6-1				D08.6-2
<b>WP9</b>												
<b>T9.1</b>												
<b>T9.2</b>												D09.2-0
<b>WP10</b>												
<b>T10.1</b>												D10.1-2 V4
<b>T10.2</b>												
<b>T10.3</b>											D10.3-2 V3 D10.3-1 V2	
<b>WP11</b>												
<b>T11.1</b>						D11.1-2 V3						D11.1-3 V3
<b>T11.2</b>												

Fig. 2.3 Deliverables accomplished from September 2007 to August 2008.

The corresponding deliverables are listed below:

D01.3-1 V4	Trend Screening report on VAN relevant technologies (M36) PU
D02.4-1	Software Architecture and Interface Specification (Final) (M30) CO
D03.4-2	Wireless Prototype System (M32) CO
D03.5-1	Test specification, test cases and results (M34) CO
D04.4-1 (p1) <sup>1</sup>	Implementation of RT mechanisms in embedded devices and systems for industrial environments, QoS mechanisms in Telecommunication networks (Preliminary Deliverable) (M25) CO
D04.4-1 (p2)	Implementation ... (Preliminary Deliverable V2) (M30) CO
D04.4-1	Implementation ... (Final Version) (M35) CO
D04.5-1	Test cases for D04.4-1 and validation, Test specification and results (M36) CO
D05.4-1	Safety Mechanisms implementation in Process Industry and Manufacturing Industry; Prototype devices (Final) (M36) CO
D05.5-1	Test and validation of prototypes (preliminary) (M27) CO
D06.3-1	Service definition and protocol (functional) specification of a security layer (M30) CO
D06.4-1	Security mechanisms prototype implementation (M34) CO
D06.5-1	Test report (M36) CO
D07.3-1	Common Interface Specification, Gateway Specification (M34) CO
D08.4-2	Specification of object model and tool interfaces for VAN engineering tool platform (M26) PU
D08.5-1	Specification of Engineering Tool Prototypes for Stand-Alone Concept (M32) CO
D08.5-2	Prototype implementation of Engineering Tool Prototypes for Stand-Alone Concept (M36) CO
D08.6-1	Specification of Engineering Tool Prototypes for Integrated Concept (M32) CO
D08.6-2	Prototype implementation of Engineering Tool Prototypes for Integrated Concept (M36) CO
D09.2-0	IES Report (M36) CO
D10.1-2 V4	Plan for using and disseminating knowledge (M36) PU
D10.3-1 V2	European Competence Group – Report 2 (M35) PU
D10.3-2 V3	Gender-action-plan report (update) (M35) PU
D11.1-2 V3	Intermediate Progress and Activity Report (M30) CO
D11.1-3 V3	Progress and Activity Report (M36) CO

From the above list, D01.3-1 V4, D08.4-2, D10.1-2 V4, D10.3-1 V2 and D10.3-2 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 2007 to August 2008 (see Annex II)

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<sup>1</sup> This report was delivered as a preliminary version (p1) in M25, then there was a second preliminary one (p2) in M30, and the final version was due in M35.

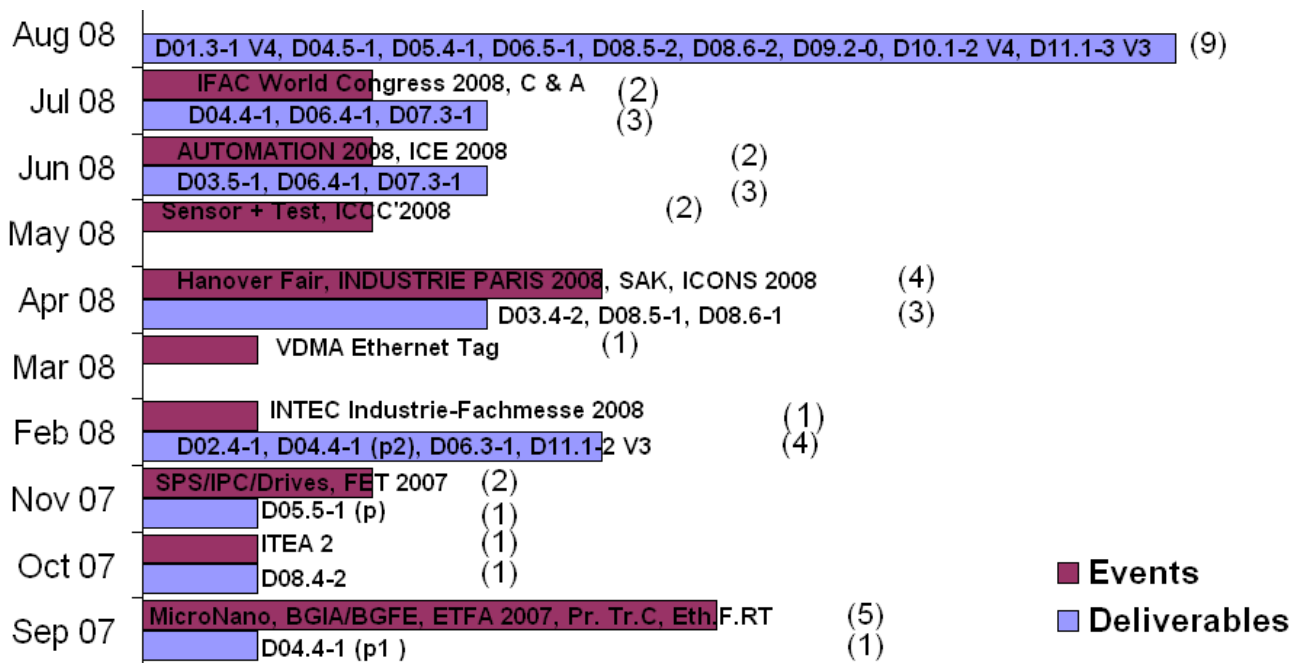


Fig. 2.4 Accomplished dissemination events and deliverables from September 2007 to August 2008.

## 2.3 European Competence Group related events

After the establishment of the European Competence Group (ECG), further ECG meetings have been organised and held during major events in the automation field.

Implementation work in most of the technical WPs is currently coming to a final stage and the main focus now is on the specification/implementation work of the Industrial Experimental Setups for Factory and Process Automation. Parts of this work have been presented and discussed during the second and third ECG meetings that took place during the SPS/IPC/Drives Fair (28.11.2007) and the Hanover Fair (24.4.2008).

The second ECG aimed at giving the guests a good overview about the topic “industrial communication”, starting from today’s architecture to future approaches and use-cases. At that point, an introduction into the VAN main concepts and the specification with a special focus on three main VAN topics were given. The event was organised as a workshop with several presentations for mental stimulation and with time for feedback and review. 20 people on average attended this conference

For the third ECG meeting, a joint dissemination event with the EC STREP Pabadis’Promise was organised and conducted during Hanover Fair. It seemed very promising that the synergies of both research projects with the headline “Order based Automation via Public networks – Novel Technologies and Architectures in Automation Technology” and the combination of both Industrial Groups, namely European Competence Group – ECG@VAN – and the Associated Reference Group – ARG@P2, would attract more interested parties than single meetings. This joint event attracted 35 interested parties.

From VAN side, the following presentations were shown:

- “Future of Industrial Communication”, by C. Schwab (Siemens AG)
- “Technical Architecture and Prototyping in Factory and Process Automation”, by R. Greiner-Jacob (Siemens AG)
- “Implementation Aspects”, by R. Messerschmidt (ifak e.V.)

More information on this can be found in D10.3-1 V2 European Competence Group – Report 2 and at VAN website.

## 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 2009. VAN members aim at presenting there the latest results achieved within the project.

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

Short name	Full name	Date
Innotrans	International Trade Fair for Transport Technology Innovative Components Vehicles Systems	Sep, 2008
ETFA 2008	13 <sup>th</sup> IEEE International Conference on Emerging Technologies and Factory Automation	Sep, 2008
ICC 2008	Industrial Communication Congress 2008	Sep, 2008
SPS/IPC/Drives 2008	SPS/IPC/Drives. Electric Automation. Systems and Components	Nov, 2008
IECON 2008	34 <sup>th</sup> Annual Conference of the IEEE Industrial Electronics Society	Nov, 2008
Hanover Fair	Hanover Fair	April, 2009
DCDS'9	2 <sup>nd</sup> IFAC Workshop on Dependable Control of Discrete Systems	Jun, 2009
I*PROMS	I*PROMS Virtual Conference	July, 2009

Table 3.1 Planned dissemination events from September 2008 to August 2009.

### 3.2 Expected progress of the project

During the last year of the project the objective is to install prototype devices, engineering systems and networks, both wired and wireless, at identified test sites. The site-specific requirements, such as code and safety, EMC and emission requirements, will be developed in consultation with the expected host site owner and the local authorities. The necessary permits will be sought. Attention will be directed towards designing specific (short duration) test campaigns and experiments that allow scale-up projection of results relevant to the process industries.

Next project review will be held in November 2008 and the current Description of Work of VAN project [DoW08] describes work to be done until February 2009. So, the expected deliverables for that period of time are:

- D02.4-2 Prototype Software for VAN Open Platform (M39) CO
- D02.4-3 Setup of testing laboratory for VAN products (M39) CO
- D05.5-1 Test and validation of prototypes (final) (M39) CO
- D08.7-1 Specification of Engineering Tool Support for the Industrial Experimental Setups (M40) CO

D11.1-3 V4 Intermediate Progress and Activity Report (M42) CO

Table 3.2 List of deliverables from September 2008 to February 2009.

For next period, all deliverables are classified as CO (confidential).

The following graph classifies these deliverables by work package:

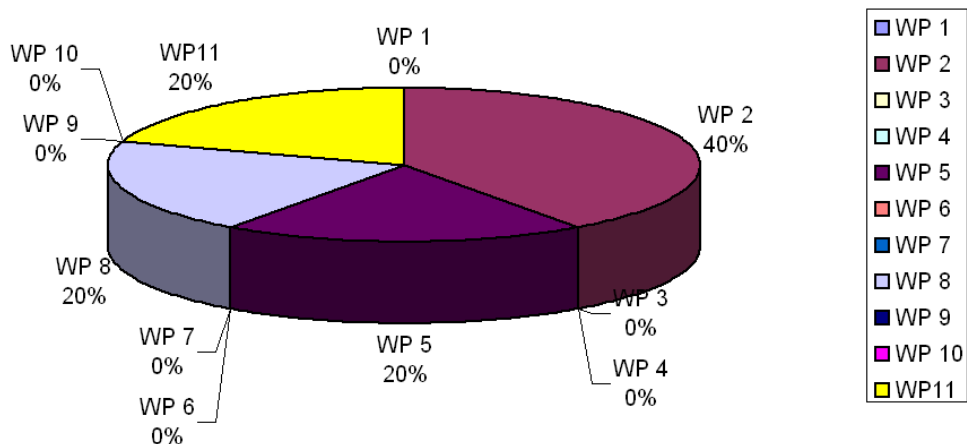


Fig. 3.1 Expected deliverables from September 2008 to February 2009, classified by work package.

	Year 2007				Year 2008									Year 2009				
	Se	Oc	No	De	Ja	Fe	Mar	Ap	May	Jun	Jul	Au	Se	Oc	No	De	Ja	Fe
WP1																		
T1.3												D01.3-1 V4						
WP2																		
T2.4						D02.4-1									D02.4-2 D02.4-3			
WP3																		
T3.4								D03.4-2										
T3.5										D03.5-1								
WP4																		
T4.4	D04.4-1 (p1)					D04.4-1 (p2)					D04.4-1							
T4.5												D04.5-1						
WP5																		
T5.4												D05.4-1						
T5.5		D05.5-1													D05.5-1			
WP6																		
T6.3						D06.3-1												
T6.4										D06.4-1								
T6.5												D06.5-1						
WP7																		
T7.3										D07.3-1								
T7.4																		
WP8																		
T8.4	D08.4-2																	
T8.5								D08.5-1				D08.5-2						
T8.6								D08.6-1				D08.6-2						
T8.7																D08.7-1		
WP9																		
T9.1																		
T9.2												D09.2-0						
WP10																		
T10.1												D10.1-2 V4						
T10.2																		
T10.3												D10.3-2 V3 D10.3-1 V2						
T10.4																		
WP11																		
T11.1								D11.1-2-V3				D11.1-3-V3						D11.1-2-V4
T11.2																		

Fig. 3.2 Planned deliverables, from September 2008 to February 2009.

Below there is a graph summarizing dissemination events and deliverables planned by VAN membership between September 2008 and August 2009. Past events and deliverables since September 2007 are also included.

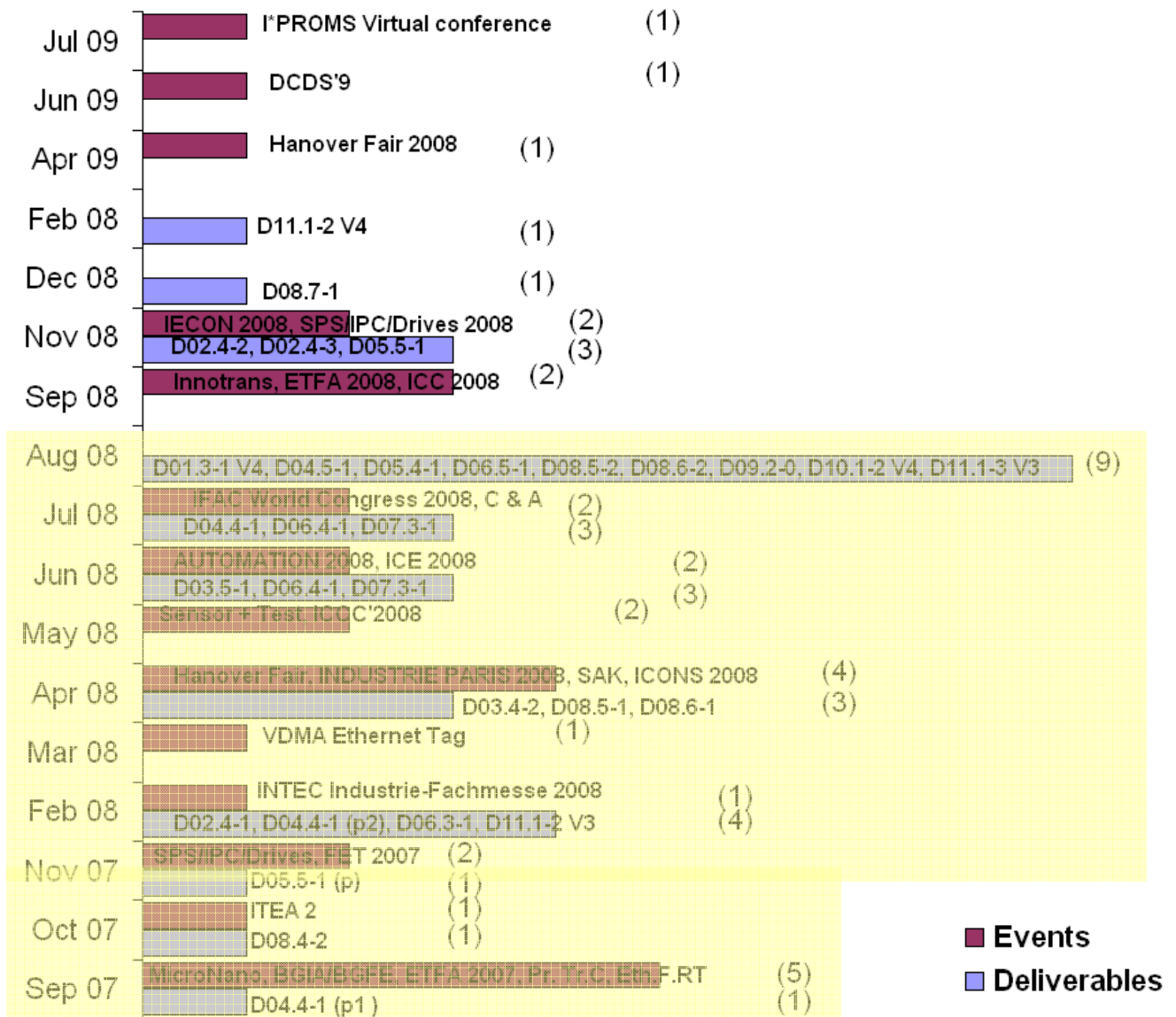


Fig. 3.3 Dissemination events and deliverables from September 2008 to August 2009.

## 4 VAN Dissemination Channels and Tools

### 4.1 Channels

#### 4.1.1 Web site

Due to the fact that the project has reached its third year now, important progress has been achieved on the technical side. This has led to an important number of publications and participations in events, mainly focused on the industry audience. The web site contents have been updated accordingly, showing the related publications and events inside the specific section “News and Events”.

Moreover, due to the great amount of material publicly available under the section “Publications”, it seemed most advisable to let the audience download it after free registration.

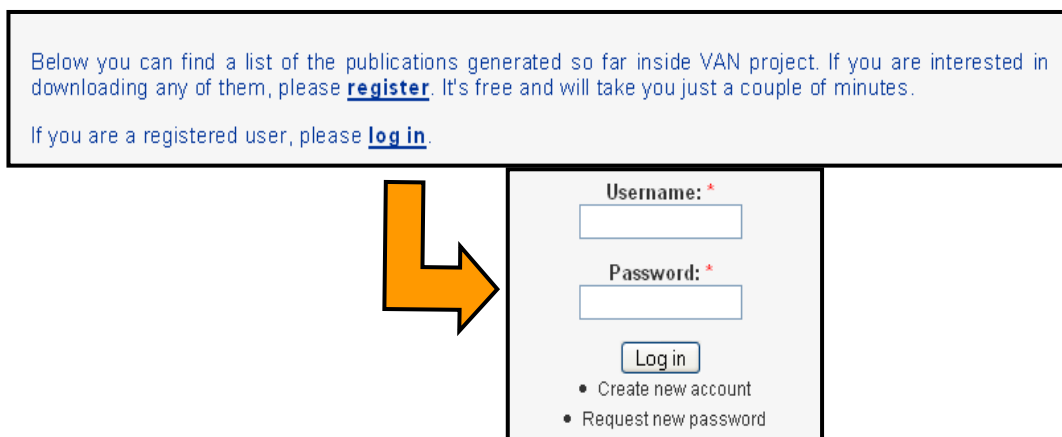


Fig. 4.1 How to register at VAN website

When registering, users are requested to give a few details that help us to identify their interests in the project. They are asked for the company they are working for and their specific interest in VAN. According to the answers gathered so far, they partly work for private firms and partly are doing research at university. There are also several ones who are students and search for useful information for their PhD thesis. Among their interests, we have found: automation trends, wireless networks for process automation, reliability in wireless networks, web services, industrial communication products, automation networks, networked control systems, zigbee wireless in VAN, engineering software architectures, safety critical communication, wireless sensor networks and wireless automation.

#### 4.1.2 Groupware

No remarkable changes can be attributed to this internal dissemination channel. It goes on serving as an ideal tool for information exchange and database among the consortium.

### 4.2 Tools

#### 4.2.1 Newsletter

The fourth issue of VAN newsletter was released on last April. It is currently available at:

[http://www.van-eu.eu/sites/van/pages/files/VAN\\_Newsletter04-08.pdf](http://www.van-eu.eu/sites/van/pages/files/VAN_Newsletter04-08.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 previous to the publication of the newsletter. This time, attention was focused on: CVS (University of Magdeburg), Siemens, Politecnico di Milano and Machining Centers Manufacturing. The related events were: ETFA 2007, ITEA 2 Symposium, INDUSTRIE Paris Fair, and SPS/IPC/Drives Fair.
- **Interview with Dr. Ronald Schoop (Vice President Connectivity Architectures & Platforms Automation Business Unit):** This time it was the turn of Schneider to give their views on the project. Schneider Electric is WP8 leader, and as such, they are responsible for the planning, design and implementation of VAN specific engineering features (e.g. security, safety, network management and others) and their integration in the necessary engineering tool platform that will support the VAN IESs.
- **Meet the partners:** This time, Forschungszentrum Karlsruhe, Machining Centers Manufacturing S. P. A, and CARTIF Foundation were presented.
- **Future Events:** Includes the most remarkable future events for VAN dissemination interests. This time a detailed description on the participation at Hanover Fair was given. This included presentations of both PABADIS'PROMISE and VAN project. Other remarkable events were The Sensor + Test Fair, the 14<sup>th</sup> International Conference on Concurrent Enterprising (ICE 2008), the 6<sup>th</sup> IEEE International Conference on Industrial Informatics (INDIN 2008), the IPROMS Virtual International Conference on Intelligent Production Machines and Systems, and finally, the 17<sup>th</sup> IFAC World Congress, which this time included an Invited Session where VAN partners could participate with 5 papers.
- **Meetings:** As usual, this section includes the most relevant recent meetings.

Everyone accessing <http://www.van-eu.eu/> can download VAN newsletters freely. Furthermore, there exists a mailing list of selected addressees aiming to get to the appropriate audiences. It is partly formed by the people registered to access the publications section and those from VAN interest group. In general, these people come from public and private organizations with a high interest 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 Superieure des Telecommunications, CNR, IBM, ABB, France Telecom, Fraunhofer FIT, Nokia Research Center, Ericsson AB, etc.

#### 4.2.2 VAN Brochure

A commercial brochure has been produced and presented during last project review meeting (April 2008). It is a two-page electronic document that shows VAN vision, as well as a description of the project work plan and a description of the European Competence Group objectives. It is available at the project website under the Downloads section.

### 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 and the most visited sections.

#### 4.3.1 Web page

Two graphs are displayed below with data regarding the visits paid to VAN web site along the years 2007 and 2008. From year 2007, only information from October to December is new, as the rest was presented in last Plan for Using and Disseminating Knowledge.

Monthly history

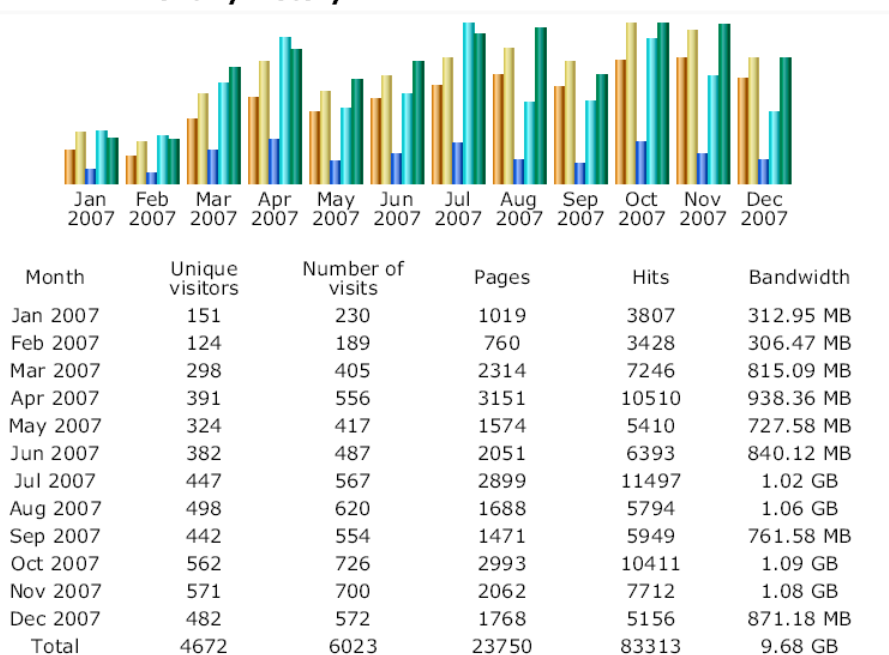


Fig. 4.2 Monthly indicators for 2007 (only months Sep 07 – Dec 07 are relevant for this report).

Monthly history

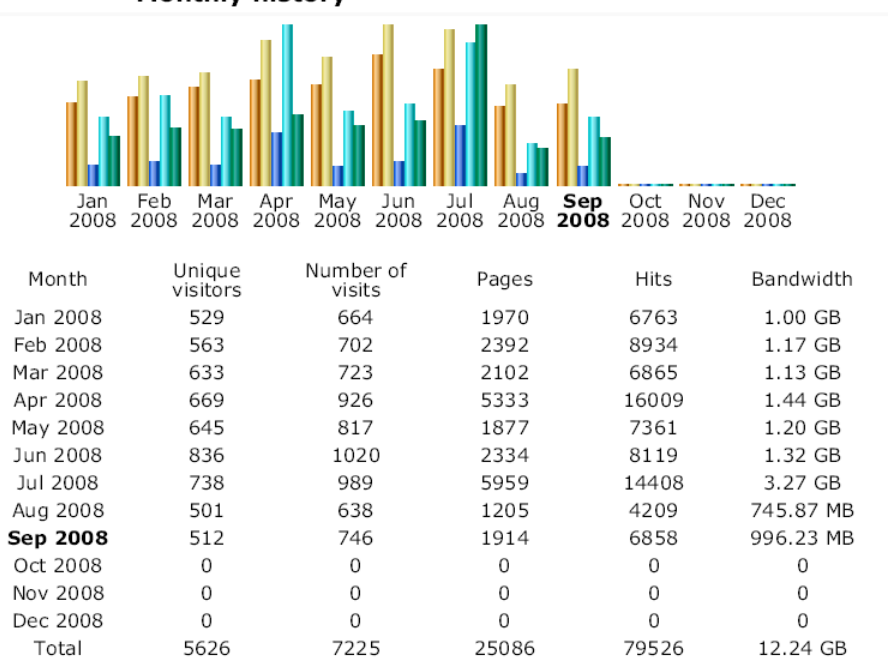


Fig. 4.3 Monthly indicators for 2008.

When comparing indicators from 2007 to those of 2008, it is clear that all of them have improved in the sense that more users are accessing the web site. This can be seen from the unique visitors (since January 2008 there have been no less than 500 each month), and also when checking the number of visits (no less than 600 during 2008). This is as expected due to the fact that more contents are being available.

The origin of the users accessing the web is also important. The following couple of tables show the countries from which visits have been performed both in 2007 and 2008.

**Countries (Top 10) - Full list**











	Countries		Pages	Hits	Bandwidth	
	Germany	de	3969	18627	1.63 GB	
	United States	us	1887	5113	1.35 GB	
	Spain	es	1071	4682	475.11 MB	
	China	cn	472	617	387.86 MB	
	Italy	it	336	1588	246.72 MB	
	Great Britain	gb	332	1399	236.61 MB	
	Czech Republic	cz	328	1905	116.93 MB	
	France	fr	271	1047	217.63 MB	
	Poland	pl	186	815	125.33 MB	
	Finland	fi	186	822	134.43 MB	
	Others		14712	46698	4.81 GB	

Fig. 4.4 Visits per Country (2007).

**Countries (Top 10) - Full list**











	Countries		Pages	Hits	Bandwidth	
	Germany	de	4251	19799	1.52 GB	
	United States	us	3142	11539	1.33 GB	
	Spain	es	798	3157	404.87 MB	
	Italy	it	451	1826	355.59 MB	
	Romania	ro	438	713	86.34 MB	
	China	cn	413	631	275.55 MB	
	France	fr	315	1379	323.66 MB	
	Great Britain	gb	308	1068	212.13 MB	
	India	in	267	680	327.05 MB	
	Canada	ca	231	671	197.04 MB	
	Others		14472	38063	7.25 GB	

Fig. 4.5 Visits per Country (2008).

There are no remarkable changes in the top positions, and some variations regarding the last ones.

There follows a table including the list of more visited sections inside VAN web site. This data have been gathered for years 2007 and 2008.

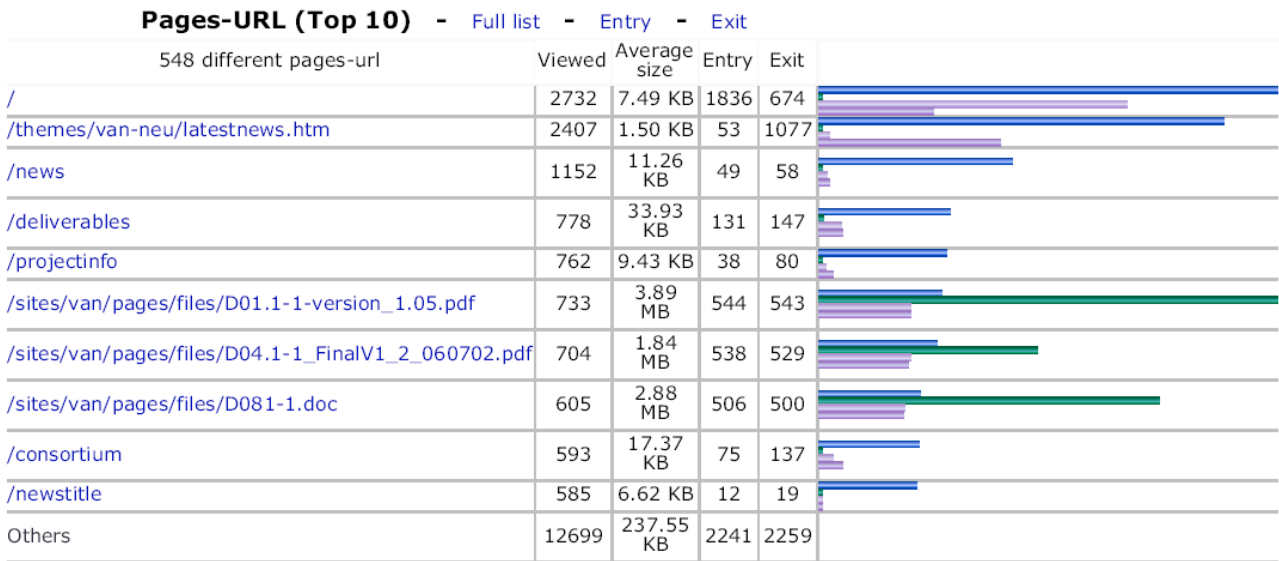


Fig. 4.6 List of more often visited VAN web site sections during year 2007.

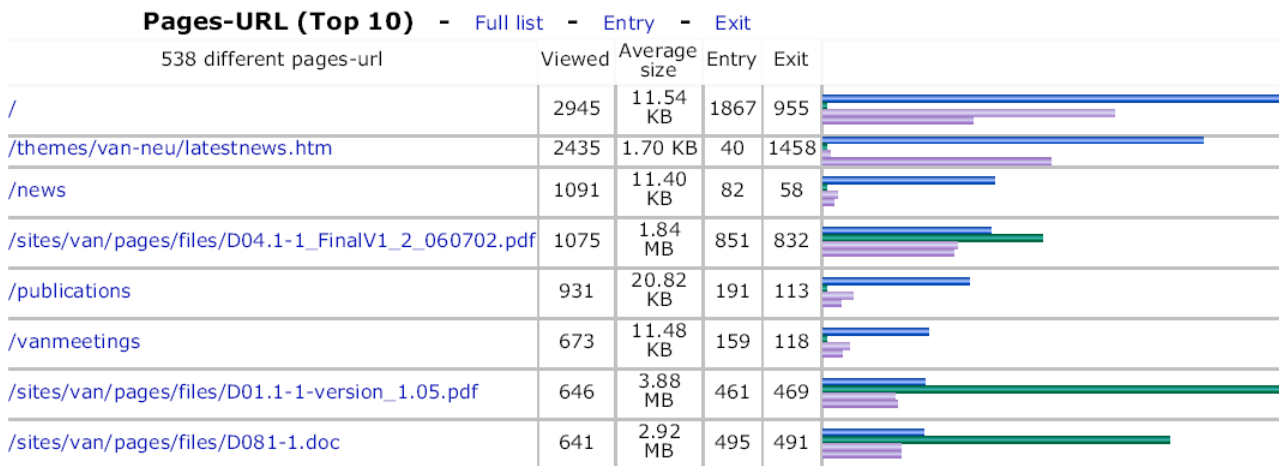


Fig. 4.7 List of more often visited VAN web site sections during year 2008.

The general layout is the same; that is, latest news are still the most visited, there follows the news, and then some deliverables. Apparently D01.1-1 (State of the Art and Trends in safety, security, wireless technologies and real-time properties), D04.1-1 (Real Time for Embedded Automation Systems including Status and Analysis and closed loop Real time control) and D081.1-1 (Overview on existing engineering tools and Requirements for engineering tools for the “VAN” platform) keep being the most downloaded ones.

### 4.3.2 GroupWare

The number of users accessing the GroupWare is an indicator of the workload along time. Below there are related graphs displaying this information both for years 2007 and 2008.

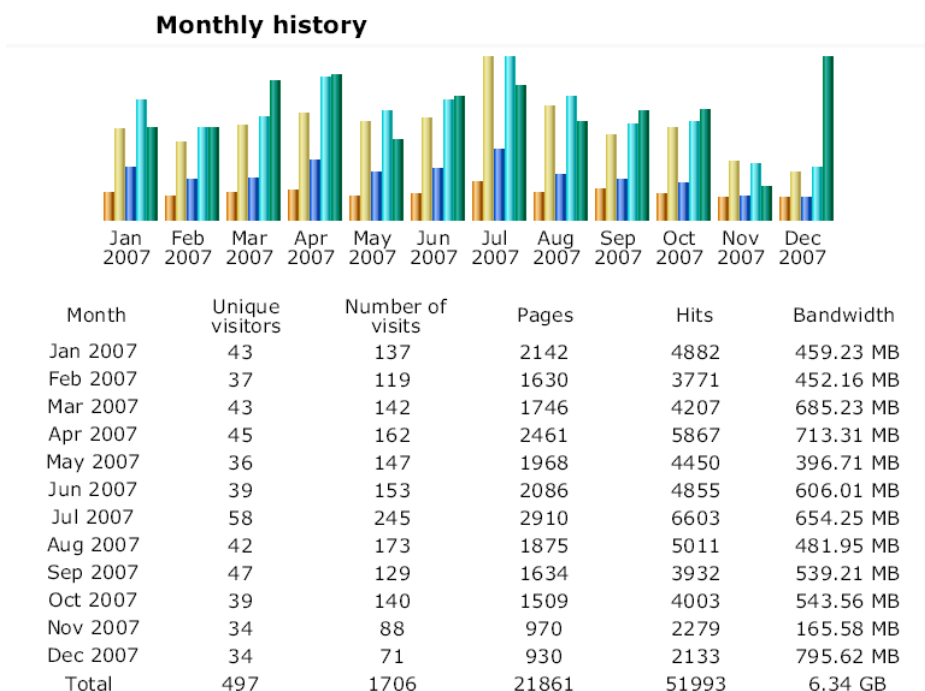


Fig. 4.8 Accesses to the GroupWare (2007).

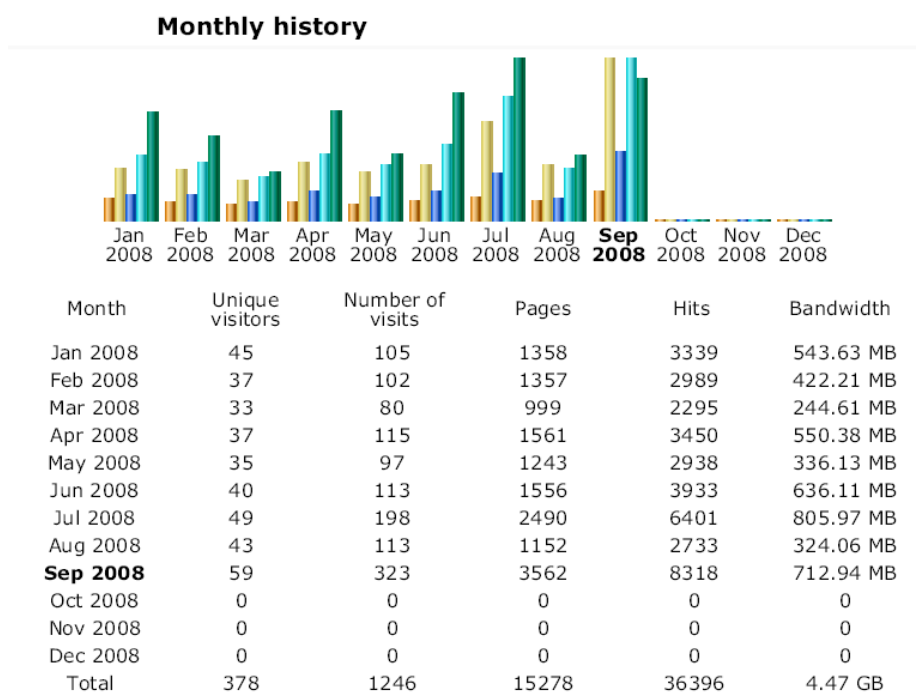


Fig. 4.9 Accesses to the GroupWare (2008)

Figs 4.7 and 4.8 give an idea of the working pace inside the consortium. It is quite regular both during 2007 and 2008. We just notice a higher degree of activity during July and September 2008. The reason for this might be the fact that most people are taking their holidays in August and work must be done during the previous and following months. Moreover, last August a big amount of deliverables was due.

## 5 Dissemination plan assessment

Following with the framework presented in the first version of this report (D10.1-2 V1) VAN partners have filled in the Dissemination Plan Template [DPT07], giving information on both past and future events they have attended during 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 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 September 2007 to August 2009. This means that both the already accomplished and the foreseen ones are included. The related figures can be found in Annex I.

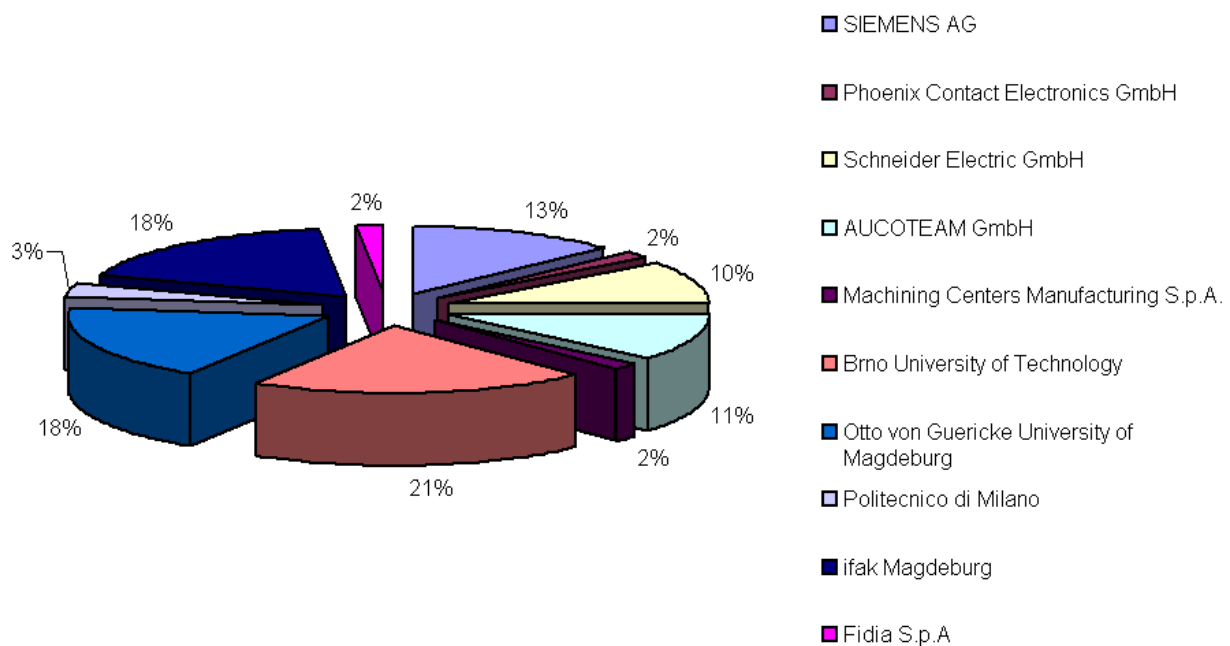


Fig. 5.1 Degree of participation of VAN partners in dissemination events.

Figure 5.2 shows the participation of VAN partners in past and future dissemination events, that is, from September 2007 to August 2009. The different channels (Standardisation, Mass Media, etc.) are displayed in different colours inside a unique column for each partner. The related figures can be found in Annex II.

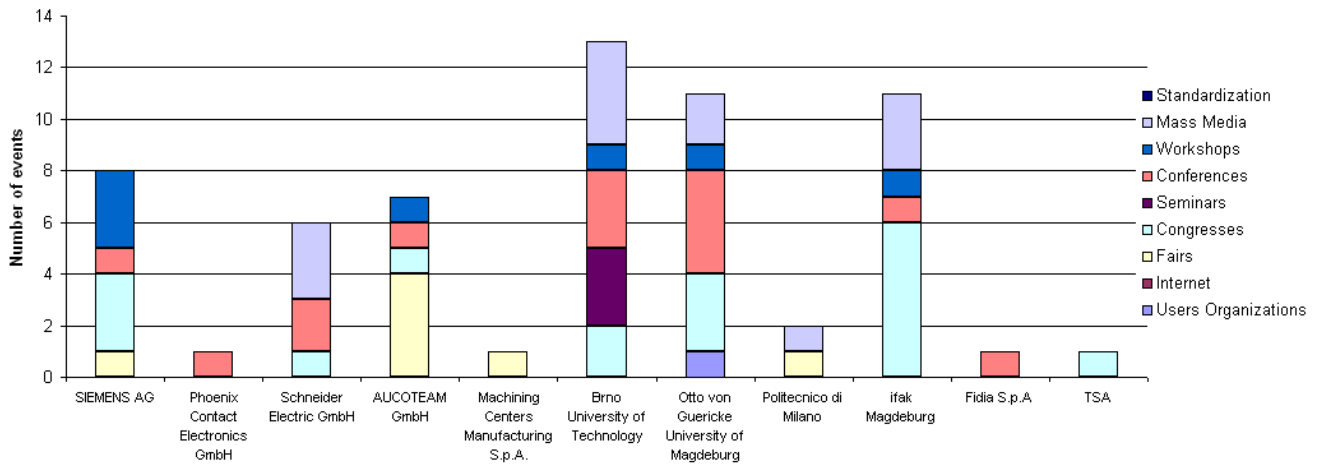


Fig. 5.2 Participation of VAN partners in dissemination events.

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

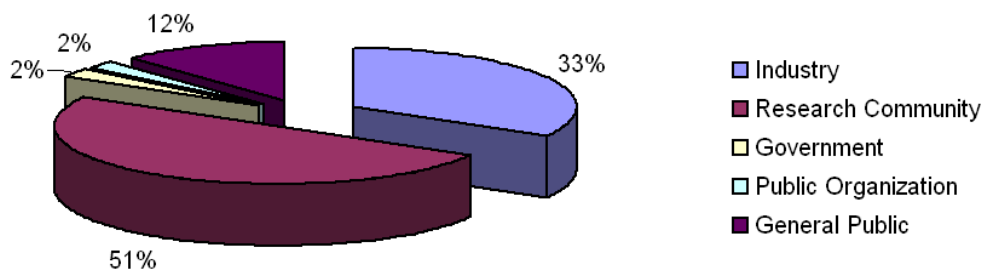


Fig. 5.3 Dissemination contributions in terms of audience.

Fig 5.4 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.

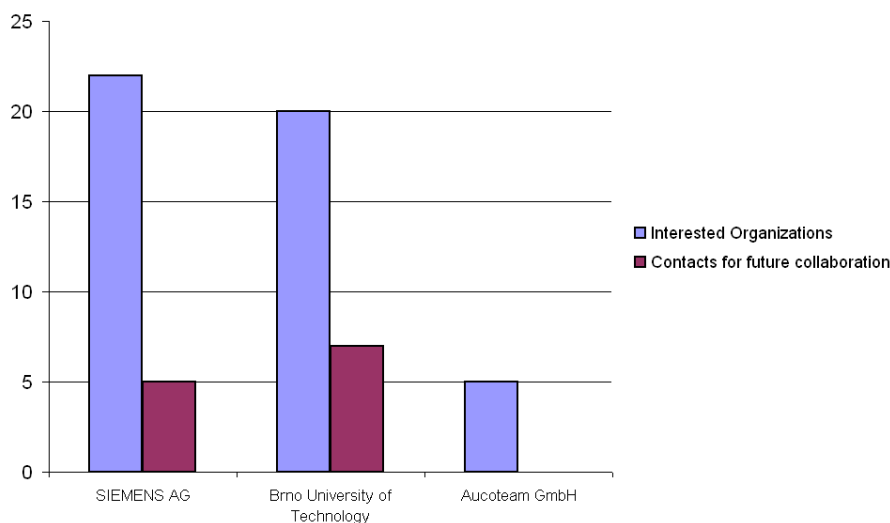


Fig. 5.4 Assessment indicators for past contributions in some remarkable events.

## 6 Conclusions

At this stage of the project, WP9 has become the central instance for the coordination and implementation of work in most of the technical WPs, which is currently coming to a final stage. From now on, the focus is on the specification and implementation work of the industrial experimental setups for factory and process automation, always under the supervision of the Technical Project Coordination Committee (TechPCC).

VAN ECG has already successfully organized their three first workshops within the framework of the Hanover Fair and the SPS/IPC/Drives Fair. Expert groups of market-relevant user groups from factory and process automation, device and machine suppliers, system integrators and companies are keeping track of the latest achievements within the project.

According to the assessment indicators on dissemination, the research community is now the commonest audience for VAN dissemination events. Industry is in the second position, and much lower participation is left for the others. It is not easy to reach a wide non-specialized audience as the project approaches its end because all related material (deliverables, publications, etc) is more and more technical oriented.

VAN partners are increasing the quality of the produced dissemination material. This can be clearly deduced both from the interest shown by the public at the website (increased number of visits) and the number of contacts made by VAN partners during public events.

## Glossary

DoW	Description of Work
EC	European Commission
ECG	European Competence Group
IES	Industrial Experimental Setups
IEEE	Institute of Electrical and Electronics Engineers
TechPCC	Technical Project Coordination Committee
LAN	Local Area Network
VAN	Virtual Automation Network
WAN	Wide Area Network
WP	Work Package

## References

- [DoW08] Description of Work for months M25-M42
- [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 V2] D10.3-1 V2 European Competence Group – Report 2
- [DPT07] Dissemination Plan Template (version 3)

## 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 SPS/IPC/Drives

SPS/IPC/DRIVES is the exhibition for electric automation technology. It covers all components down to the system and offers herewith integrated automation solutions. Exhibitors and visitors profit from the advantage that visiting numerous exhibitions on components becomes superfluous.

The exhibitors - manufacturers of electric automation technology - present products and services from the following sectors:

- Control Technology
- IPCs
- Drive Systems and Components
- Human-Machine-Interface Devices
- Industrial Communication
- Industrial Software
- Interface Technology
- Electromechanical Components and Peripheral Equipment
- Sensor Technology

Partner	Contribution	Target audience
SIEMENS AG	VAN Presentation and European Competence Group Meeting #2	Research Community
<b>Assessment indicators</b>		
Number of participants		20
Interested organizations		6
Contacts made for possible future collaboration		1
Web site impact		
Scope		National and International

Table I.1 Assessment indicators for SPS/IPC/Drives 2007, contribution from SIEMENS.

Partner	Contribution	Target audience
Aucoteam GmbH	Hierarchical control systems for bio power plants	Research Community
<b>Assessment indicators</b>		
Number of participants		70
Interested organizations		1
Contacts made for possible future collaboration		
Web site impact		
Scope		National and International

Table I.2 Assessment indicators for SPS/IPC/Drives 2007, contribution from Aucoteam GmbH.

## I.2 Hanover Fair 2008

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 Presentation and Joint Dissemination Event (European Competence Group Meeting #3) with EC STREP Pabadis'Promise	Research Community
<b>Assessment indicators</b>		
Number of participants		35
Interested organizations		6
Contacts made for possible future collaboration		2
Web site impact		
Scope		National and International

Table I.3 Assessment indicators for Hanover Fair 2008, contribution from SIEMENS.

### I.3 Siemens Automatisierungs-Kreis

The "Siemens Automatisierungs-Kreis" ("Siemens Automation Circle") is an annually and Siemens organised conference for practitioner and researcher in the automation field.

In this occasion there were two contributions from VAN project: one from SIEMENS (see table I.4) and another one from Heitec:

Mr. K. Wehmeyer, Heitec AG (Applikation mit neuen Kommunikationstechniken in der Prozessindustrie). "Application with new communication techniques in Process Industry" dealing with the application of VAN in automation (SUI).

Partner	Contribution	Target audience
SIEMENS AG	VAN Presentation annual conference of SAK (Siemens Automatisierungs-Kreis). Title: The future of industrial communication	Industry
Heitec AG	Application with new communication techniques in Process Industry	Industry
<b>Assessment indicators</b>		
Number of participants		40
Interested organizations		10
Contacts made for possible future collaboration		2
Web site impact		
Scope		National

Table I.4 Assessment indicators for Siemens Automatisierungs-Kreis, contribution from SIEMENS.

### I.4 IFAC World Congress

The INTERNATIONAL FEDERATION OF AUTOMATIC CONTROL, founded in September 1957, is a multinational federation of National Member Organizations (NMOs), each one representing the engineering and scientific societies concerned with automatic control in its own country.

The aims of the Federation are to promote the science and technology of control in the broadest sense in all systems, whether, for example, engineering, physical, biological, social or economic, in both theory and application. IFAC is also concerned with the impact of control technology on society.

Partner	Contribution	Target audience
Brno University of Technology	Paper in Invited Session: Evaluation of Real-time Behaviour in Virtual Automation Networks	Research Community
<b>Assessment indicators</b>		
Number of participants		2700
Interested organizations		5
Contacts made for possible future collaboration		4
Web site impact		
Scope		International

Table I.5 Assessment indicators for IFAC World Congress, contribution from Brno University of Technology.

## I.5 Interview for local newspaper

Partner	Contribution	Target audience
Brno University of Technology	Interview on VAN project, its intended outcomes and contributions to industrial automation	General Public
<b>Assessment indicators</b>		
Number of participants		15
Interested organizations		6
Contacts made for possible future collaboration		0
Web site impact		
Scope		National

Table I.6 Assessment indicators for an interview for a local newspaper, from Brno University of Technology.

## I.6 9<sup>th</sup> International Carpathian Control Conference

Partner	Contribution	Target audience
Brno University of Technology	Paper: Architectural Aspects of Virtual Automation Networks	Research Community
<b>Assessment indicators</b>		
Number of participants		200
Interested organizations		2
Contacts made for possible future collaboration		2
Web site impact		
Scope		International

Table I.7 Assessment indicators for the 9<sup>th</sup> International Carpathian Control Conference, from Brno University of Technology.

## I.7 1<sup>st</sup> International Workshop on Advanced Manufacturing Systems

Partner	Contribution	Target audience
Brno University of Technology	Paper: Quality of Service Measurement in Virtual Automation Networks	Research Community
<b>Assessment indicators</b>		
Number of participants		20
Interested organizations		2
Contacts made for possible future collaboration		1
Web site impact		
Scope		Regional

Table I.8 Assessment indicators for the 1<sup>st</sup> International Workshop on Advanced Manufacturing Systems, from Brno University of Technology.

## I.8 3<sup>rd</sup> IEEE International Conference on Systems

Partner	Contribution	Target audience
Brno University of Technology	Paper: Precise measurement of wireless network roaming functionality and network component parameters applied for automation systems	Research Community
<b>Assessment indicators</b>		
Number of participants		250
Interested organizations		3
Contacts made for possible future collaboration		0
Web site impact		
Scope		International

Table I.9 Assessment indicators for the 3<sup>rd</sup> IEEE International Conference on Systems, from Brno University of Technology.

## I.9 Invited Lecture within a Master's subject at BUT

Partner	Contribution	Target audience
Brno University of Technology	Introduction to Virtual Automation Networks	Public Organizations
<b>Assessment indicators</b>		
Number of participants		45
Interested organizations		2
Contacts made for possible future collaboration		0
Web site impact		
Scope		Regional

Table I.10 Assessment indicators for an invited Lecture within a Master's subject at Brno University of Technology.

## I.10 Sensor + Test

Partner	Contribution	Target audience
Aucoteam GmbH	VAN-based sensor / actuator networks	Industry
<b>Assessment indicators</b>		
Number of participants		80
Interested organizations		2
Contacts made for possible future collaboration		
Web site impact		
Scope		

Table I.11 Assessment indicators for Sensor + Test from Aucoteam GmbH.

## I.11 Innotrans

Partner	Contribution	Target audience
Aucoteam GmbH	Using public network for monitoring and control	Industry
<b>Assessment indicators</b>		
Number of participants		40
Interested organizations		2
Contacts made for possible future collaboration		
Web site impact		
Scope		

Table I.12 Assessment indicators for Innotrans, from Aucoteam GmbH.

## 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

<b>Contribution:</b>	VAN project presentation
<b>Author:</b>	Aucoteam GmbH
<b>Event:</b>	International conference "Micro Nano Reliability 2007"
<b>Date:</b>	2 <sup>nd</sup> September 2007
<b>Venue:</b>	Fraunhofer Institut IZM Berlin, Germany
<b>Target audience:</b>	Research Community
<b>Motivation:</b>	Dissemination of VAN idea in the international research community. Acquisition of international co-operation partners for further development of VAN solutions.
<b>Degree of importance:</b>	4

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

<b>Contribution:</b>	Uniform Engineering of Distributed Control Systems – The VAN Approach
<b>Author:</b>	SIEMENS AG, Otto von Guericke University of Magdeburg, Schneider Electric GmbH
<b>Event:</b>	ETFA 2007 - IEEE International Conference on Emerging Technologies and Factory Automation
<b>Date:</b>	25 <sup>th</sup> -28 <sup>th</sup> September 2007

<b>Venue:</b>	Patras, Greece
<b>Target audience:</b>	Research Community
<b>Degree of importance:</b>	3, 4

<b>Contribution:</b>	“Virtual Automation Networks. Topology and System Architecture”
<b>Author:</b>	Ifak Magdeburg
<b>Event:</b>	7 <sup>th</sup> IFAC International Conference on Fieldbuses and Networks in Industrial and Embedded Systems
<b>Date:</b>	7 <sup>th</sup> , 8 <sup>th</sup> , 9 <sup>th</sup> November 2007
<b>Venue:</b>	Toulouse, France
<b>Target audience:</b>	Industry

<b>Contribution:</b>	Paper: Precise measurement of wireless network roaming functionality and network component parameters applied for automation systems
<b>Author:</b>	Brno University of Technology
<b>Event:</b>	3 <sup>rd</sup> IEEE International Conference on Systems
<b>Date:</b>	13 <sup>th</sup> -18 <sup>th</sup> April , 2008
<b>Venue:</b>	Mexico
<b>Target audience:</b>	Research Community
<b>Motivation:</b>	Presentation of the research results regarding real time.
<b>Degree of importance:</b>	1

<b>Contribution:</b>	Paper: Architectural Aspects of Virtual Automation Networks
<b>Author:</b>	Brno University of Technology
<b>Event:</b>	9 <sup>th</sup> International Carpathian Control Conference
<b>Date:</b>	6 <sup>th</sup> – 8 <sup>th</sup> May 2008
<b>Venue:</b>	Sinaia, Romania
<b>Target audience:</b>	Research Community
<b>Motivation:</b>	Presentation of architecture of the VAN future products to research community
<b>Degree of importance:</b>	2

<b>Contribution:</b>	Engineering verteilter Automatisierungssysteme
<b>Author:</b>	Otto von Guericke University of Magdeburg
<b>Event:</b>	AUTOMATION 2008

<b>Date:</b>	3 <sup>rd</sup> – 4 <sup>th</sup> June 2008
<b>Venue:</b>	Baden-Baden, Germany
<b>Target audience:</b>	Research Community
<b>Motivation:</b>	Presentation of distributed control system, promotion of VAN results.
<b>Degree of importance:</b>	4

<b>Contribution:</b>	Engineering of Distributed Control Systems
<b>Author:</b>	Otto von Guericke University of Magdeburg, Schneider Electric GmbH
<b>Event:</b>	International Conference on Concurrent Enterprising
<b>Date:</b>	23 <sup>rd</sup> -25 <sup>th</sup> June 2008
<b>Venue:</b>	Lisboa, Portugal
<b>Target audience:</b>	Industry
<b>Motivation</b>	Presentation of VAN with focus on Distributed Engineering; promotion of VAN results
<b>Degree of importance</b>	4

<b>Author:</b>	Otto von Guericke University of Magdeburg
<b>Event:</b>	ETFA 2008
<b>Date:</b>	15 <sup>th</sup> -18 <sup>th</sup> September 2008
<b>Venue:</b>	Hamburg, Germany
<b>Target audience:</b>	Research Community

<b>Contribution:</b>	Paper: Virtual Automation Networks - Architectural Principles and Development
<b>Author:</b>	Brno University of Technology
<b>Event:</b>	34 <sup>th</sup> Annual Conference of the IEEE Industrial Electronics Society
<b>Date:</b>	November, 2008
<b>Venue:</b>	Orlando, USA
<b>Target audience:</b>	Research Community
<b>Motivation</b>	Presentation of the architecture
<b>Degree of importance</b>	4

<b>Contribution:</b>	Advanced Production Machines and Systems
<b>Author:</b>	Fidia S.p.A

<b>Event:</b>	I*PROMS Virtual Conference
<b>Date:</b>	July, 2009
<b>Target audience:</b>	Research Community

## Workshops

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

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

<b>Contribution:</b>	Trends und Entwicklung von Kommunikationsstrukturen / Virtuelle Netzwerke der Automatisierung
<b>Author:</b>	Otto von Guericke University of Magdeburg
<b>Event:</b>	6. Tag der Automation und Robotik /INTEC Industrie-Fachmesse 2008
<b>Date:</b>	26 <sup>th</sup> February 2008
<b>Venue:</b>	Leipzig, Germany
<b>Target audience:</b>	Industry
<b>Motivation</b>	Promote trends in industrial communication; presentation of VAN approach
<b>Degree of importance:</b>	4

<b>Contribution:</b>	VAN Presentation and Joint Dissemination Event (European Competence Group Meeting #3) with EC STREP Pabadis'Promise
<b>Author:</b>	SIEMENS AG
<b>Event:</b>	Hanover Fair 2008
<b>Date:</b>	24 <sup>th</sup> April 2008
<b>Venue:</b>	Hanover, Germany
<b>Target audience:</b>	Research Community
<b>Degree of importance:</b>	3

<b>Contribution:</b>	VAN Presentation and Joint Dissemination Event (European Competence Group Meeting #4) with EC STREP Pabadis'Promise
<b>Author:</b>	SIEMENS AG
<b>Event:</b>	SPS/IPC/Drives 2008
<b>Date:</b>	25 <sup>th</sup> – 27 <sup>th</sup> November 2008
<b>Venue:</b>	Nuremberg, Germany
<b>Target audience:</b>	Research Community
<b>Degree of importance:</b>	3

<b>Contribution:</b>	VAN Presentation and European Competence Group Meeting #5
<b>Author:</b>	SIEMENS AG
<b>Event:</b>	Hanover Fair 2009
<b>Date:</b>	20 <sup>th</sup> – 24 <sup>th</sup> April 2009
<b>Venue:</b>	Nuremberg, Germany
<b>Target audience:</b>	Research Community
<b>Degree of importance:</b>	3

<b>Contribution:</b>	Planned paper: Findings on real-time behaviour of L3 network devices
<b>Author:</b>	Brno University of Technology
<b>Event:</b>	2 <sup>nd</sup> IFAC Workshop on Dependable Control of Discrete Systems
<b>Date:</b>	June 2009
<b>Venue:</b>	Bari, Italy
<b>Motivation</b>	Presentation of the research results regarding real time.
<b>Target audience:</b>	Research Community
<b>Degree of importance:</b>	1

## Mass Media

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

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

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

<b>Contribution:</b>	Serie: Das „virtuelle“ Automatisierungsnetzwerk Teil 4 – Die Herausforderungen in punkto Engineering
<b>Author:</b>	Schneider Electric GmbH, Otto von Guericke University of Magdeburg, Ifak Magdeburg
<b>Event:</b>	Computer&Automation, WEKA Fachzeitschriften-Verlag GmbH, Mindelheim, Ausgabe 07 – 2008, Seite 42-45

<b>Date:</b>	July 2008
<b>Venue</b>	Germany
<b>Target audience:</b>	Industry
<b>Motivation</b>	Promote VAN results
<b>Degree of importance</b>	5

<b>Contribution:</b>	Integrated Engineering Concept for Web Service Enhanced Field Device Configuration
<b>Author:</b>	Schneider Electric GmbH, Otto von Guericke University of Magdeburg, Ifak Magdeburg
<b>Event:</b>	Journal: IEEE Transactions on Automation Science and Engineering (T-ASE)
<b>Date:</b>	2008/2009
<b>Target audience:</b>	Industry

## Seminar

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

<b>Contribution:</b>	Introduction to Virtual Automation Networks
<b>Author:</b>	Brno University of Technology
<b>Event:</b>	Invited Lecture within a Master's subject at BUT
<b>Date:</b>	February 2008
<b>Target audience:</b>	Public Organization
<b>Motivation:</b>	Presentation of the architecture
<b>Degree of importance:</b>	4

<b>Contribution:</b>	Planned presentation
<b>Author:</b>	Brno University of Technology
<b>Event:</b>	Presentation of Virtual Automation Networks at Open Day at BUT

<b>Date:</b>	January 2009
<b>Target audience:</b>	General Public
<b>Motivation:</b>	Presentation of the architecture
<b>Degree of importance:</b>	4

## Fairs

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

<b>Contribution:</b>	VAN Presentation and European Competence Group Meeting #2
<b>Author:</b>	SIEMENS AG
<b>Event:</b>	SPS/IPC/Drives 2007
<b>Date:</b>	28 <sup>th</sup> November 2007
<b>Venue:</b>	Nuremberg, Germany
<b>Target audience:</b>	Research Community
<b>Degree of importance:</b>	3

<b>Contribution:</b>	Presentation at INDUSTRIE PARIS 2008
<b>Author:</b>	MCM, Polimi
<b>Event:</b>	INDUSTRIE PARIS 2008
<b>Date:</b>	31 <sup>st</sup> March - 4 <sup>th</sup> April 2008
<b>Venue:</b>	Paris-Nord Villepinte – FRANCE
<b>Target audience:</b>	Industry

<b>Contribution:</b>	VAN-based sensor / actuator networks
<b>Author:</b>	Aucoteam GmbH
<b>Event:</b>	Sensor + Test

<b>Date:</b>	15 <sup>th</sup> May 2008
<b>Venue:</b>	Munich, Germany
<b>Target audience:</b>	Industry
<b>Degree of importance:</b>	4

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

<b>Contribution:</b>	Security solutions for control systems
<b>Author:</b>	Aucoteam GmbH
<b>Event:</b>	SPS & Drives Fair 2008
<b>Date:</b>	25 <sup>th</sup> November 2008
<b>Venue:</b>	Nuremberg, Germany
<b>Target audience:</b>	Industry
<b>Degree of importance:</b>	5
<b>Motivation</b>	Give information's on security solutions, acquisition

## User Organizations

<b>Contribution:</b>	Netzwerksicherheit in der Automatisierung
<b>Author:</b>	Otto von Guericke University of Magdeburg
<b>Event:</b>	VDMA Ethernet Tag
<b>Date:</b>	31 <sup>st</sup> March 2008
<b>Venue:</b>	Frankfurt, Germany
<b>Target audience:</b>	Industry
<b>Degree of importance:</b>	5
<b>Motivation</b>	Presentation of VAN security concept

## Congresses

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

<b>Contribution:</b>	VAN Presentation annual conference of SAK (Siemens Automatisierungs-Kreis) Title Siemens: The Future of industrial communication, Title Heitec: Application with new communication techniques in Process Industry
<b>Author:</b>	SIEMENS AG / Heitec AG
<b>Event:</b>	Siemens Automatisierungs-Kreis
<b>Date:</b>	29 <sup>th</sup> April 2008
<b>Venue:</b>	Cologne, Germany
<b>Target audience:</b>	Industry
<b>Degree of importance:</b>	3

<b>Contribution:</b>	Paper in Invited Session: Architectural Concept of Virtual Automation Networks
<b>Author:</b>	Ifak Magdeburg
<b>Event:</b>	IFAC World Congress 2008
<b>Date:</b>	6 <sup>th</sup> – 11 <sup>th</sup> July 2008
<b>Venue:</b>	Convention and Exhibition Center (COEX), Seoul, Korea
<b>Motivation</b>	Bring the notion of the VAN Project and the new real-time capabilities of industrial Ethernet into research community
<b>Target audience</b>	Research Community
<b>Degree of importance</b>	5

<b>Contribution:</b>	Paper in Invited Session: Public network and telecontrol concepts in Virtual Automation Networks
<b>Author:</b>	Aucoteam GmbH, Ifak Magdeburg
<b>Event:</b>	IFAC World Congress 2008

<b>Date:</b>	6 <sup>th</sup> – 11 <sup>th</sup> July 2008
<b>Venue:</b>	Convention and Exhibition Center (COEX), Seoul, Korea
<b>Motivation</b>	Bring the notion of the VAN Project and the new real-time capabilities of industrial Ethernet into research community
<b>Target audience</b>	Research Community
<b>Degree of importance</b>	5

<b>Contribution:</b>	Paper in Invited Session: Evaluation of Real-time Behaviour in “Virtual Automation Networks”
<b>Author:</b>	Brno University of Technology
<b>Event:</b>	IFAC World Congress 2008
<b>Date:</b>	6 <sup>th</sup> – 11 <sup>th</sup> July 2008
<b>Venue:</b>	Convention and Exhibition Center (COEX), Seoul, Korea
<b>Motivation</b>	Bring the notion of the VAN Project and the new real-time capabilities of industrial Ethernet into research community
<b>Target audience</b>	Research Community
<b>Degree of importance</b>	5

<b>Contribution:</b>	Paper in Invited Session: Wireless Network Integration into Virtual Automation Networks
<b>Author:</b>	Ifak Magdeburg, Brno University of Technology
<b>Event:</b>	IFAC World Congress 2008
<b>Date:</b>	6 <sup>th</sup> – 11 <sup>th</sup> July 2008
<b>Venue:</b>	Korea
<b>Motivation</b>	Bring the notion of the VAN Project and the concepts of integration of wireless technologies into VAN to research community
<b>Target audience:</b>	Research Community
<b>Degree of importance:</b>	4

<b>Contribution:</b>	Paper in Invited Session: Secure Virtual Automation Networks based on a Generic Procedure Model
<b>Author:</b>	TSA, ifak Magdeburg
<b>Event:</b>	IFAC World Congress 2008
<b>Date:</b>	6 <sup>th</sup> – 11 <sup>th</sup> July 2008
<b>Venue:</b>	Korea
<b>Motivation</b>	Bring the notion of the VAN Project and the concepts of integration of wireless technologies into VAN to research community

<b>Target audience:</b>	Research Community
<b>Degree of importance:</b>	4

<b>Contribution:</b>	Engineering Concept of Virtual Automation Networks
<b>Author:</b>	Otto von Guericke University of Magdeburg, Schneider Electric GmbH
<b>Event:</b>	IFAC World Congress
<b>Date:</b>	6 <sup>th</sup> – 11 <sup>th</sup> July 2008
<b>Venue:</b>	Seoul, Korea
<b>Target audience:</b>	Industry
<b>Motivation</b>	Promotion of VAN results
<b>Degree of importance</b>	4

<b>Contribution:</b>	VAN Booth at Industrial Communication Congress 2008 (VAN demonstrator system consisting of several IPCs and PCs showed parts of the latest developments of the project, presentation of posters, flyers, etc.)
<b>Author:</b>	SIEMENS AG, Otto von Guericke University of Magdeburg, ifak Magdeburg
<b>Event:</b>	ICC 2008
<b>Date:</b>	16 <sup>th</sup> – 17 <sup>th</sup> September 2008
<b>Venue:</b>	Bad Pyrmont
<b>Target audience:</b>	Industry
<b>Motivation</b>	Promotion of VAN results
<b>Degree of importance</b>	4