



VAN

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Virtual Automation Networks

Work Package 10
Exploitation and Dissemination

Task 10.3

Establishment of European Competence Group

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European Competence Group – Report 1

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Executive summary

This document is dedicated to report on the European Competence Group (ECG) activities. In general, the ECG is intended to be a consortium of possible end-users from factory and process automation, device and machine suppliers, system integrators, and companies which possibly could provide VAN technology in the future. At ECG meetings, the VAN consortium presents current results of work to get feedback and to evaluate, if especially the end user requirements are met by VAN and to bring the research results into more practical applications.

Please note that only ECG related activities are reported here. The general dissemination activities, including publications, organisation of tracks/sessions on conferences etc. are taken into account in the respective deliverables in Task 10.1 and 10.2.

Contents

- 1 Preface 6**
- 2 Objectives of European Competence Group 7**
- 3 Constitution of European Competence Group 8**
- 4 Meetings of European Competence Group 9**
 - 4.1 ECG Meeting on Hanover Fair 2006 9
 - 4.1.1 Set-up of the meeting 9
 - 4.1.2 Feedback 9
 - 4.2 Future Activities 10
- 5 Conclusion 11**

List of figures

Figure 3.1: Leaflet Hanover Fair of 18.04.2007 (VAN Excerpt).....8

1 Preface

During the first 18 month project period, preparation activities to establish the European Competence Group (ECG) took place. Later on, and after the preparation of first results and concepts of VAN, the first ECG meeting has been organised to take place during Hanover Fair on 18.04.2007.

To have this kind of meeting during the main automation fairs seems to be most promising, as interested people and all experts in the relevant area are on-site and the event can benefit from official marketing activities by the fair organisation.

First valuable contacts to interested parties could already be established during 2006' Hanover Fair (April 2006) and SPS/IPC/Drives in November 2006, although no official ECG meetings have been organised there. Both fairs, in addition with other activities such as conferences, formal and informal presentations could be seen as preparation and supporting activities for the ECG meeting.

Most of ECG activities are performed during peak periods – lasting from one or two months before an ECG meeting until the meeting itself – although the duration of the respective task is longer. Between the ECG meetings, only minor work, such as distribution of marketing materials, establishment of new contacts, is planned.

Preparation, content and feedback of the first ECG Meeting are reported in more detail in Chapter 4 of this document.

2 Objectives of European Competence Group

The objective of VAN European Competence Group (ECG) is to provide a platform for dissemination of the project knowledge and concepts, as well as to extend the project results beyond the project consortium and time frame. The competence group represents the requirements and concepts for industrial automation and communication with respect to real-time, security, safety and integration with a European focus. End-users, suppliers and system integrators will be aware of new techniques and new products resulting from VAN project by means of regular ECG activities and articles in relevant magazines and other publications. ECG activities are free of charge for interested companies, and meetings – for discussing their own requirements and constraints – are planned to be held regularly during major events of automation industry such as Hanover Fair or SPS/IPC/Drives in Nuremberg.

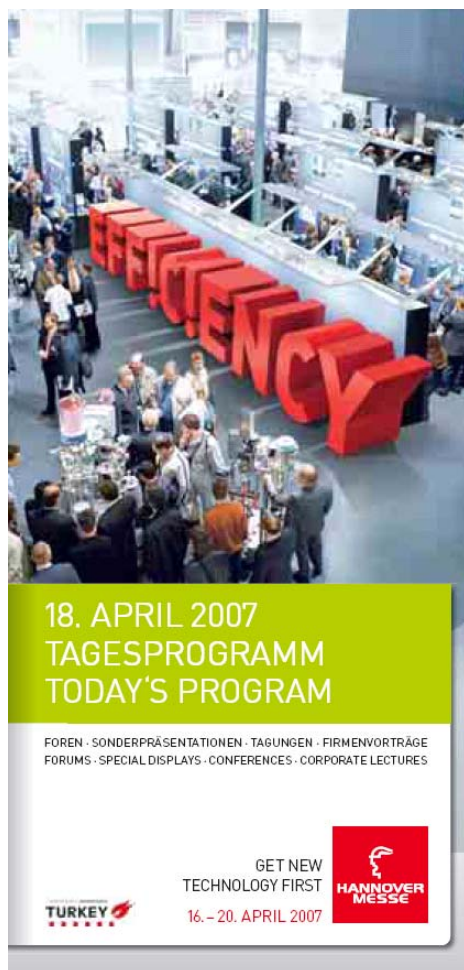
The first ECG meeting took place during Hanover Fair on 18.04.2007 between 15:00h and 17:00h.

3 Constitution of European Competence Group

The ECG should be constituted by representatives of possible suppliers and possible end-users of VAN technology. It is recommendable to have representatives of both classes as ECG members because of their different points of view on VAN, their different requirements, and their consequences for different aspects of the project work.

For the first ECG meeting nearly 300 e-mail invitations have been sent around to a wide range of international companies and institutions (the content of these invitations comprised the reason for the ECG meeting, time and place, objective of VAN, partners, and a contact person at Siemens). For reasons of lucidity, nevertheless, it does not seem to be practical to integrate a list of all contacted persons and companies in this document. In general, the existing relations and contacts of the VAN partners inside of several organisation and communities have been playing an important role while preparation of the ECG meeting. Among others, contacts were used from interested parties of Profibus International, Industrial Ethernet activities in general and Profinet technology mainly.

Moreover, publicity for the event was made via the fair organiser as such, the “Deutsche Messe AG”, by means of their daily leaflets which are distributed to all visitors at the entrance of the fair. The VAN-excerpt can be seen in the following picture:



Virtual Automation Networks - Automatisierung über öffentliche Netzwerke
Virtual Automation Networks - Automation via public Networks
Convention Center (CC), Saal 105/106
Mittwoch/Wednesday, 18.04.2007, 15:00 - 17:00 Uhr

Basierend auf dem PROFINET-Standard wird im Rahmen des EU-Forschungsprojektes VAN (Virtual Automation Networks) ein verteiltes Automatisierungssystem entwickelt, das neben lokalen Kommunikationsnetzen auch öffentliche Weitverkehrsnetze - drahtgebunden und drahtlos - in die Automatisierungslandschaft einbezieht und dabei Aspekte wie Echtzeitverhalten, Security und Safety berücksichtigt sowie ein einheitliches Engineering zur Verfügung stellt.

Veranstalter/ Organizer	Siemens AG, Automation and Drives, Nürnberg
Sprache/ Language	Deutsch/German
15:00 - 15:20	Virtual Automation Networks (VAN) - Industrielle Kommunikation der Zukunft Dr. A. Klostermeyer, Siemens A&D
15:20 - 15:40	Zum Greifen Nah - Technische Basis und Architektur von VAN Mr. R. Greiner-Jacob, Siemens A&D
15:40 - 16:00	Integration drahtloser Kommunikation in Virtuelle Automatisierungsnetze Mr. R. Messerschmidt, Dr. L. Rauchhaupt, ifak
16:00 - 16:20	Öffentliche Netze und Internet in der Automatisierung Mr. M. Wolfram, Teleport Sachsen-Anhalt
16:20 - 16:40	Einheitliches Engineering von heterogenen Netzwerken und verteilten Automatisierungssystemen Mr. M. Brill, Schneider Electric
16:40 - 17:00	Diskussion

53

Figure 3.1: Leaflet Hanover Fair of 18.04.2007 (VAN Excerpt)

4 Meetings of European Competence Group

4.1 ECG Meeting on Hanover Fair 2006

4.1.1 Set-up of the meeting

The consortium agreed to organise the first ECG meeting during Hanover Fair on 18.04.2007. The meeting mainly has been foreseen to give the guests an introduction into the VAN main concepts and the specifications with a special focus on three main VAN topics which have been worked out so far within the corresponding work packages and which are planned in the next months. To come into a deeper discussion with the participants, the event has been organised as work shop with several presentations for mental stimulation and with time for feedback and review.

To “catch” the participants from a technical point of view, the first presentation has been a general overview of the future of industrial communication aiming to the VAN project and the VAN vision in particular. This has been followed by a deeper view into the VAN architecture, ranging from the VAN main architecture, VAN device types to a VAN domain with the respective VAN extensions. Three main VAN topics of the work shop have been devoted to wireless communication in automation, the usage of public networks and the Internet in automation, and the VAN approach for the uniform engineering of heterogeneous networks and distributed automation systems.

As the leaflet distributed by Deutsche Messe AG (as shown on page 8 of this document) only displays the German version of the agenda, the following table shows the agenda as it was shown during the meeting itself – all presentations were written in English language.

#	ECG Meeting, 18.04.2007 @ Hanover Fair Agenda	Presentation by
1	Virtual Automation Networks (VAN) – Overview of Industrial Communication's Future	Siemens A&D
2	Future is Near – Technical Building Blocks and Architecture of VAN	Siemens A&D
3	Integration of Wireless Communication into Virtual Automation Networks	ifak
4	Public Nets and Internet go Automation	Teleport Sachsen-Anhalt
5	Uniform Engineering of heterogeneous Networks and Distributed Automation System	Schneider Electric

4.1.2 Feedback

During the (a bit more than) two hours of the meeting, on an average 25 persons visited the VAN ECG conference. Not all people stayed there for the whole time, others came in after the meeting's beginning, but stayed until its end.

All participants approved the main objectives of VAN and the concepts which are pursued in VAN were stated to be promising in general. Most questions which were asked referred to the difference between the VAN concept and solutions which are already available. E.g. the VAN approach how to deal with telecontrol in WP7 in contrast to existing VPN solutions was discussed and explained.

Moreover, a special interest in wireless communication was shown, which for a longer time than originally intended was discussed in multiple aspects – far beyond the VAN context as such.

4.2 Future Activities

The next ECG meeting is planned to take place during the SPS/IPC/DRIVES fair in Nuremberg between 27. and 29. November 2007. After introducing the general concept of VAN in Hanover, it might be of interest to focus on special aspects of VAN in more detail at the next event. Of special interest, topics as wireless communication and public networks/telecontrol in automation seem to be promising. While this kind of specialisation probably delivers added value to those participants who know the project by the former ECG meeting or any other event, the splits has to be done between this kind of special VAN topics and a general introduction to VAN for all those people who never heard about the project before.

The concept as such, to hire a room during one of the main automation fairs, invite people via a dedicated database, and, moreover, to use the general fair publicity to attract further participants shall be kept.

5 Conclusion

All of the guests evaluated that the problems and methodologies which are investigated in the VAN project are of high relevance in real applications. The course of the project does reflect industrial needs and requirements, especially in the context of wireless technology for industrial communication and telecontrol aspects.

The guests agreed that the overall engineering methodology and the VAN system architecture are promising. Most of the statements which hint to open problems do not query the methodology in general, but rather concretisation and completion issues.

The demonstrated Plug&Play features were assessed to be very useful as also the possibilities for remote maintenance.

Almost all the guests showed their interest in future results of the project.