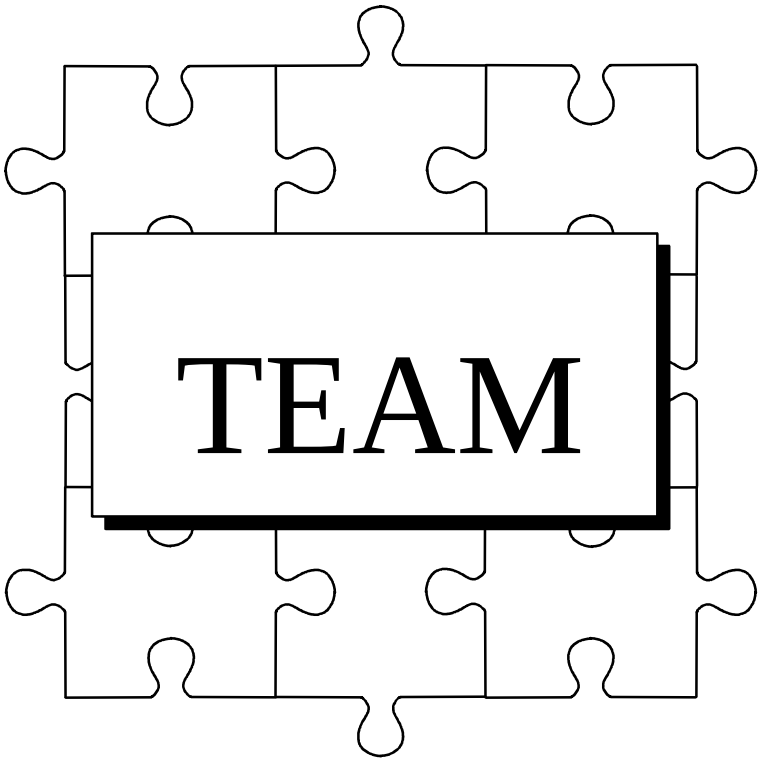


# Test Execution and Test Management for Numerical Control Software

Best Practice Action IST-1999-20333

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# Deliverable D-6

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**Table of Contents**

# 1 Abstract

The submitted paper contains the results of the Workpackage 7 (WP-7) of the IST project IST-1999-20333. The work performed in WP-7 is described in the present "Deliverable" as planed in the Description of work (DOW) /1/ (WP-7).

# 2 Objectives of WP-7

According to the Description of Work (DOW) of the TEAM project /1/ and the Dissemination Plan (DP) of the TEAM project /2/ the present deliverable describes the executed dissemination activities.

Dissemination activities were executed in order to transfer the experience in component based software development ISG and FISW Steuerungstechnik have. First of all these dissemination activities were focused on the experience gained out of the TEAM project, that deals with the improvement of Test Execution and Test Management for Numerical Control (NC) Software. In addition to this the transfer of already existing knowledge in component based software development was part of the dissemination activities (presentations, publications) in order to support the Best Practice idea.

Furthermore it was intended to obtain some feedback from experienced software developers, who can judge the execution of the TEAM project, by executing dissemination activities.

# 3 Dissemination Activities

## 3.1 External Dissemination

### 3.1.1 Presentation at International Events

The TEAM project's results were presented on different international events with Software practitioners, production engineers and research engineers (automation systems) as target audience. In particular the possibility to discuss the presented results with the audience immediately after the presentation as well as during the breaks of the event enabled an effective experience exchange and dissemination of the results.

The first international event was the 51st CIRP General Assembly hold from 19th - 25th August 2001 in Nancy, France, August (EXT-D1). As CIRP is the International Institution for Production Engineering Research /2/ the target audience were production engineering researchers from all well-known production engineering institutes all over the world.

The second presentation at an international event was a presentation on the GMA-Kongress 2001, "Automatisierungstechnik im Spannungsfeld neuer Technologien" hold from 22nd - 23rd Mai 2001 in Baden-Baden, Germany /4/ (EXT-D2). The target audience were software practitioners out of the production engineering field dealing with different kinds of automation systems. The organiser of the congress was the Society for Measurement and Automatic Control (GMA) /5/, which is the relevant society of the Association of German Engineers (VDI) /6/ for production engineers dealing with software components for automation systems.

The third presentation at an international event was done on the "EuroSPI'2001" conference hold from 10th – 12th October 2001 in Limerick, Ireland /7/ (EXT-D3). The target audience were European software practitioners, dealing with component based software development.

In addition to the presentation at an international event, planned within the DP /2/, a fourth presentation was executed on the "SAFECOMP 2001" conference hold from 25th – 28th September 2001 in Budapest, Hungary /8/ (EXT-D9). The target audience were software practitioners, dealing with safety-critical computer applications who used this conference as a platform for knowledge and technology transfer between academia, industry, and research institutions.

### 3.1.2 Presentation within Associations

As ISG and FISW Steuerungstechnik GmbH are members in different associations (e.g. /9/), the TEAM project results will be presented within meetings and experience exchanges of the relevant sub-organisations ("Software") of this associations (EXT-D4). The target audience will be software practitioners out of the production engineering field dealing with different kinds of automation systems.

So far no appropriate meeting of the relevant sub-organisations of these associations was executed during the runtime of the TEAM project. Therefore the presentation of the TEAM project's results will within these associations will be postponed to a later time. Nevertheless the contacts to other software developing companies, who are also members of the respective associations, will be continuously used for an experience exchange.

### 3.1.3 Presentation within the Cluster

According to the DOW of the TEAM project /1/ and according to the DP /2/ dissemination activities within a cluster were executed. For this purpose the cluster, consisting out of the REINDEER project and the TEAM project, executed two presentations. One presentation was performed in Turin (EXT-D5) at the 16th November 2001 and one presentation was performed in Stuttgart (EXT-D6) at the 21st February 2001.

The target audience for this presentations were the software developers of the company FIDIA S.p.A. for EXT-D5 and the software developers of the companies ISG and FISW Steuerungstechnik GmbH for EXT-D6. As all software developers of the mentioned companies are dealing with component based software for automation systems, an effective transfer of the project results to the software developers was guaranteed.

### 3.1.4 Publication via WWW

A continuous dissemination was and is the publication of the TEAM project's results via the World Wide Web (WWW) with a special TEAM project homepage (EXT-D7, /10/). Beside the publication of the project results, that are not restricted to the commission and to partners within the cluster, also links to other homepages (IST /11/, partner projects within the cluster, process improvement activities, V-Model /12/ etc.) are integrated to this homepage.

### 3.1.5 Essay in Professional Journals

To disseminate the TEAM project results among software practitioners, production engineers and NC manufacturers it was planned to publish an essay in professional journals (EXT-D8). So far no appropriate journal and edition was found. As ISG and FISW Steuerungstechnik GmbH are regularly publishing in different journals the presentation of TEAM project results will be part of a later publication.

## 3.2 Internal Dissemination

All documents describing the TEAM project results as well as all TEAM project meeting reports are available via ISG's intranet (Lotus Notes) for ISG's employees (INT-D1). In this way a continuous internal dissemination of the project results is enabled.

A further internal dissemination (INT-D2) was done during the regular meetings of ISG's software engineers, when the current state of the project is reported. This meetings was also used for short presentations of the project's results to inform ISG's software engineers about the technical state of the project. This was important to guarantee a high acceptance of the TEAM project and to optimise the integration of the project results to the daily work of all software engineers of ISG (not only the team members involved in the TEAM baseline project) within the post project activities.

# 4 Overview and Time Scheduling

| Ref. | Activity | Event | Type | Target audience | Date | State |
|---|---|---|---|---|---|---|
| EXT-D1 | 1st presentation at international event | 51st CIRP General Assembly, Nancy, France | Presentation and publication | Production engineering researchers | 19th - 25th August 2001 | Finished |
| EXT-D2 | 2nd presentation at international event | GMA-Kongress 2001, Automatisierungstechnik im Spannungsfeld neuer Technologien, Baden-Baden, Germany | Presentation and publication | Software practitioners, production engineers (automation systems) | 22nd - 23rd Mai 2001 | Finished |
| EXT-D3 | 3rd presentation at international event | EuroSPI'2001, European Software Process Improvement, Limerick, Ireland | Presentation and publication | Software practitioners | 10th – 12th October 2001 | Finished |
| EXT-D4 | External presentation | Exchange of experience within German Machinery and Plant Manufacturers' Association (VDMA), Working Group „Software", Frankfurt, Germany | Presentation | Software practitioners | Unknown at present | Planned |
| EXT-D5 | External presentation | Dissemination initiative within the cluster, Turin, Italy | Presentation | Software practitioners | 16th November 2001 | Finished |
| EXT-D6 | External presentation | Dissemination initiative within the cluster, Stuttgart, Germany | Presentation | Software practitioners | 21st February 2001 | Finished |
| EXT-D7 | Design of a TEAM-Homepage | - | Publication (via WWW) | Software practitioners | Continuously while project is running | In process |
| EXT-D8 | Essay in professional journal | - | Publication | Software practitioners, production engineers, NC manufacturers | End of the project | Evaluation of an appropriate journal and edition is running |

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| EXT-D9 | 4th presentation at international event | SAFECOMP 2001, The 20th International Conference on Computer Safety, Reliability and Security, Budapest, Hungary | Presentation and publication | Software practitioners dealing with safety-critical computer applications | 25th – 28th September 2001 | Finished |
| INT-D1 | Publication of project's documents via ISG's intranet | - | Publication | ISG | Continuously while project is running | In process |
| INT-D2 | Report on current project status/results | - | Status report and presentation | ISG | Continuously while project is running | In process |

## 5 Glossary

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| CIRP | International Institution for Production Engineering Research |
| DOW | Description of Work |
| DP | Dissemination Plan |
| EXT-D*x* | External Dissemination No. *X* |
| GMA | Gesellschaft Mess- und Automatisierungstechnik |
| INT-D*x* | Internal Dissemination No. *X* |
| ISG | Industrielle Steuerungstechnik GmbH |
| IST | Information Society Technologies |
| NC | Numerical Control |
| REINDEER | Remote Composition and Documentation of Software Products; IST project No. IST-1999-20288 |
| TEAM | Test Execution and Test Management for Numerical Control Software; IST project No. IST-1999-20333 |
| VDI | Verein Deutscher Ingenieure |
| VDMA | Verband Deutscher Maschinen- und Anlagenbauer |
| WWW | World Wide Web |

## 6 References

/1/ ISG: TEAM Project - Description of Work Version 5, Annex I of IST Contract No. IST-1999-20333, Stuttgart, 2000.

/2/ ISG: TEAM Project – Dissemination Plan, IST-1999-20333, Stuttgart, 2001.

/3/ www.cirp.net

/4/ www.vdi.de/gma/338106.pdf

/5/ www.vdi.de/gma

/6/ www.vdi.de

/7/ www.iscn.ie/conferences/eurospi2001/index.html

/8/ www.dcs.ed.ac.uk/home/safecomp/Download/safecomp2001/

/9/ www.vdma.de

/10/ www.isg-stuttgart.de/team

/11/ www.cordis.lu/ist/home.html

/12/ www.v-modell.iabg.de