

TWS/Graph



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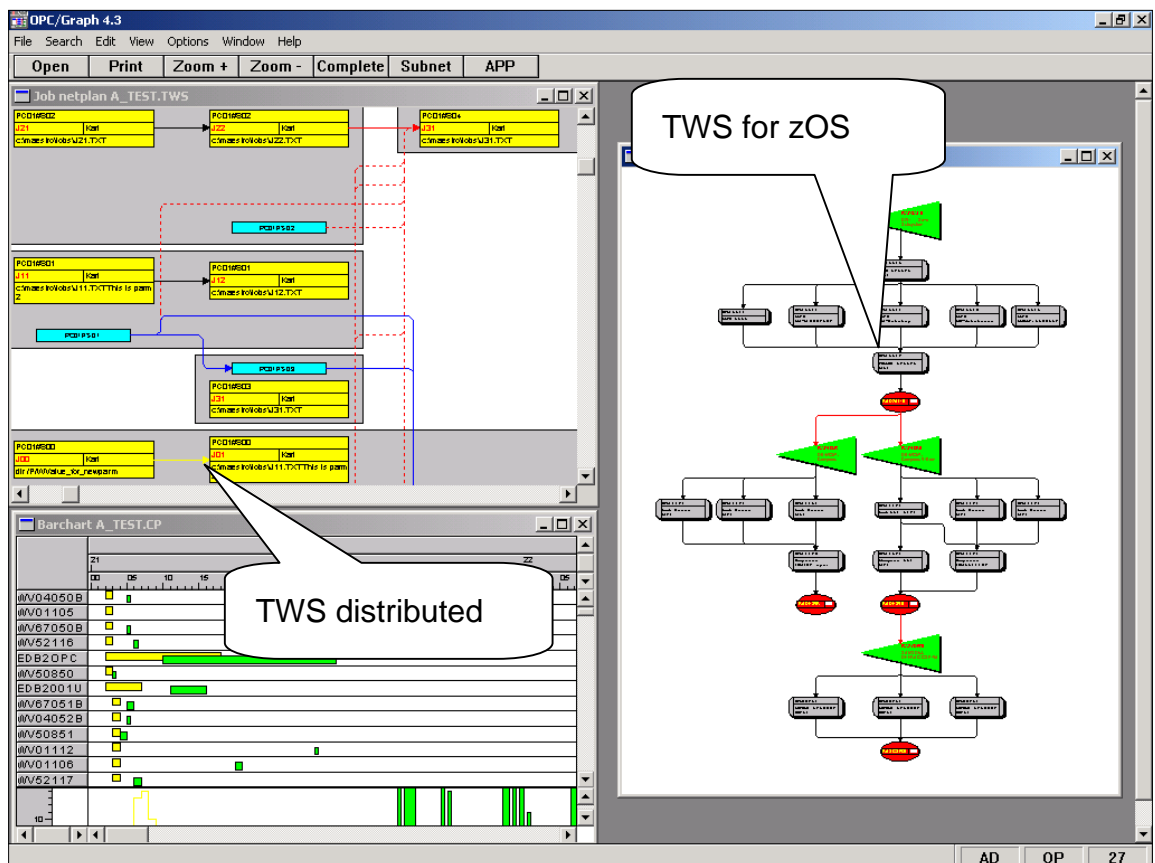
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TWS/Graph - A New View of Scheduling

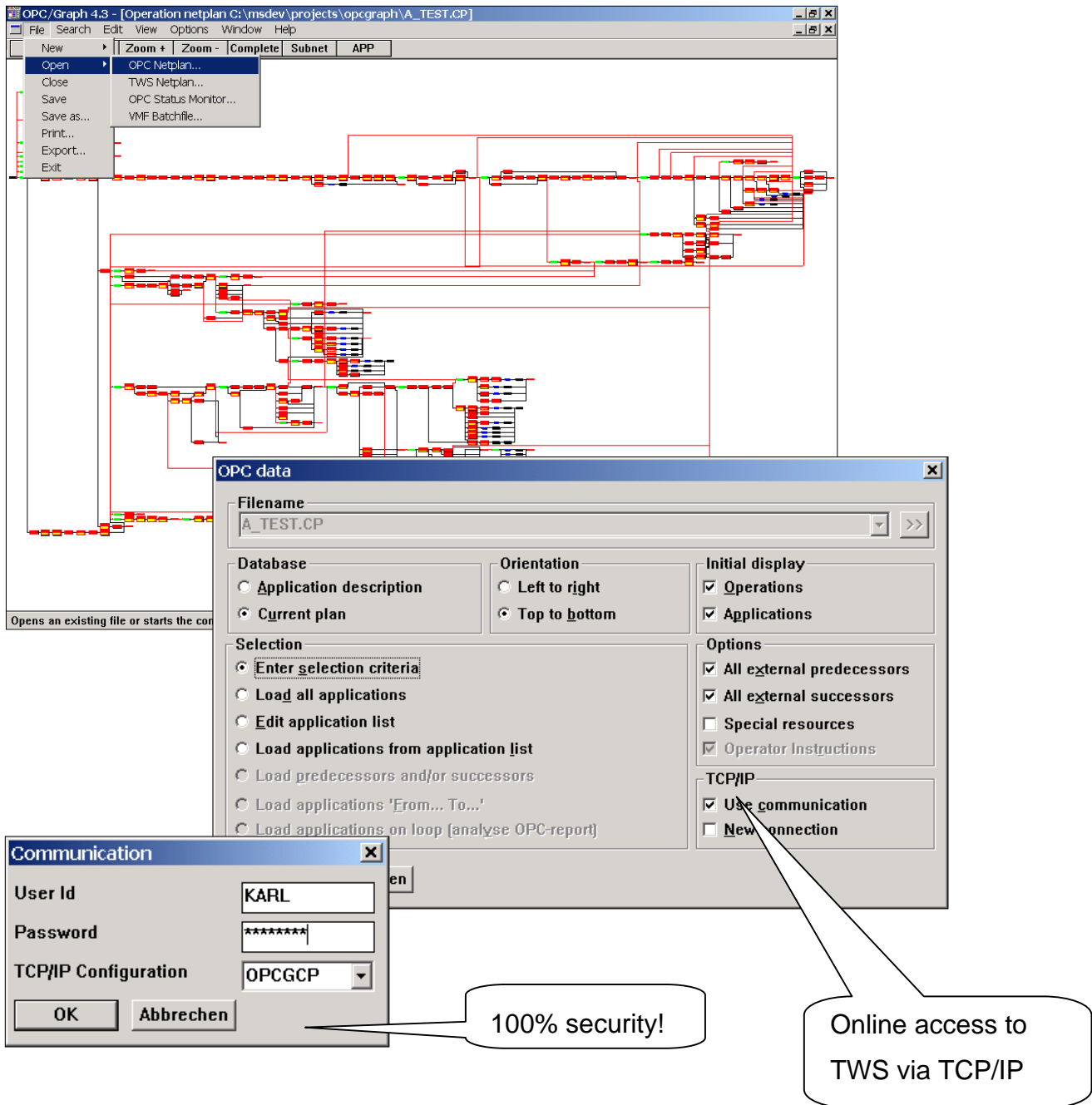
As a user of or TWS, you know how important these systems are for planning, automation, and control of your batch processing. With perhaps thousands of jobs running every night, TWS is critical to the completion of your batch production. However, as projects grow, they become harder and harder to manage. When you are faced with problems, change requests or simply the need to have TWS information available: TWS/Graph is the right choice.



TWS/Graph displays your "TWS for z/OS" and "TWS distributed" data in a way you have never seen before: Applications, schedules, jobs, resources and dependencies are shown as symbols and lines. Your information is presented as an easy to understand netplan. Symbols can be customized for clarity and convenience.

Communication between zOS and PC

The communication between TWS/Graph and "TWS for zOS" is based on TCP/IP¹. As a result no additional software (frameworks, java run time environment etc.) is required. Online communication is simple; start TWS/Graph, type in your User Id, password, enter some selection criteria, and the actual netplan will be displayed



¹ The online communication is only available for "TWS/Graph for zOS". The communication between "TWS/Graph for distributed" and TWS is based on FTP.

Selection Criteria

Search for jobs to be displayed in the netplan using any combination of fields available in your TWS database. For example, all schedules "RVT22*" having at least one job named "PDB*LOAD*" and a resource "SAP10".

The image displays the OPC/Graph 4.3 interface with several dialog boxes open to illustrate search criteria:

- Schedule Dialog:** Shows search criteria for schedules. The "Schedule" field contains "RVT22*".
- Job Dialog:** Shows search criteria for jobs. The "Job" field contains "*PDB*LOAD*".
- Prompt, File, Resource Dialog:** Shows search criteria for resources. The "Name" field contains "SAP10" and the "Type" is set to "RESOURCE".

Callouts provide additional context:

- A callout pointing to the Schedule dialog says: "Search for schedules (or applications)..."
- A callout pointing to the Job dialog says: "jobs..."
- A callout pointing to the Prompt, File, Resource dialog says: "and resources, files or prompts"

Information available at your fingertips

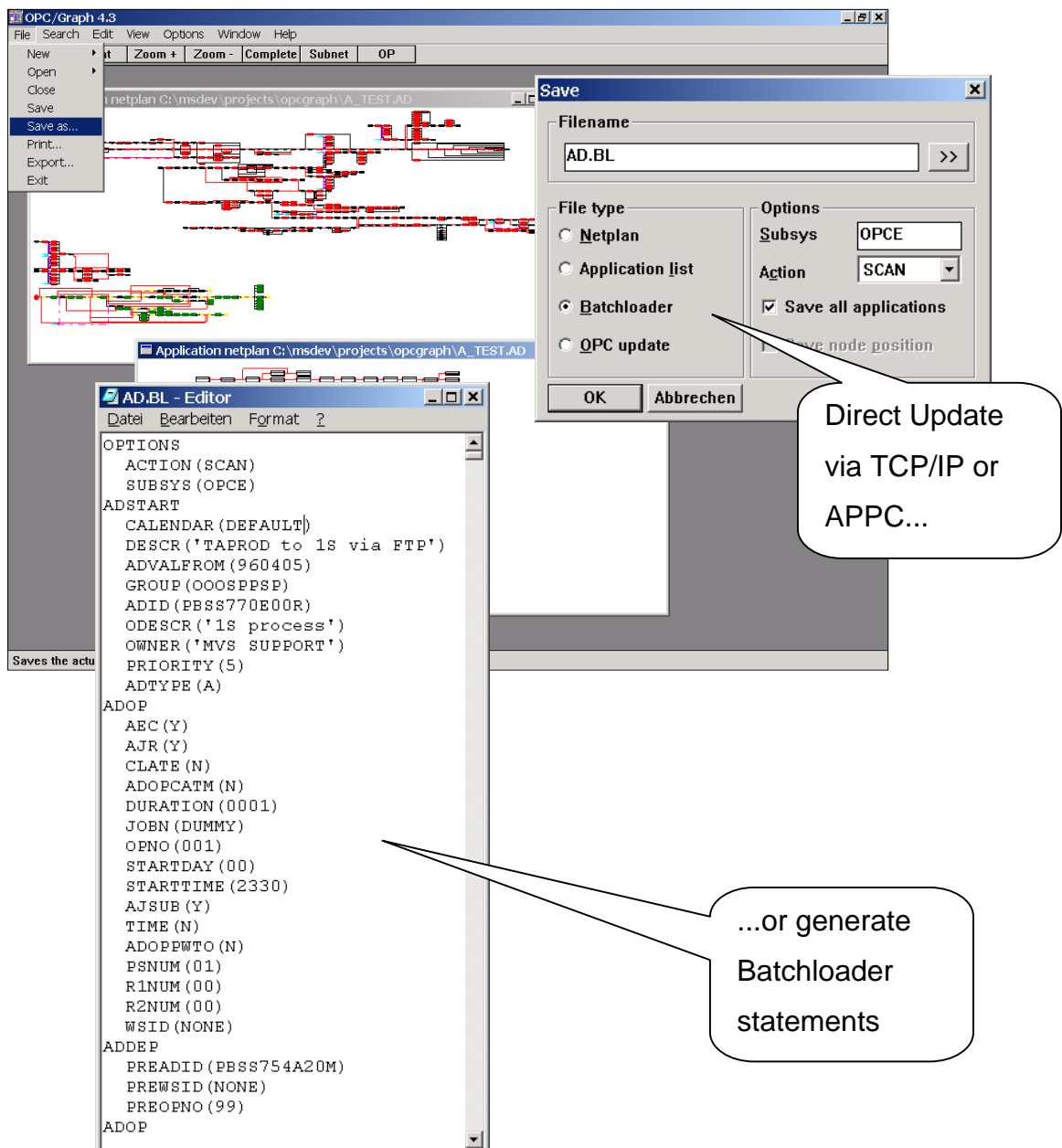
Click on a job to get all the information behind it. Use the arrow buttons to navigate between predecessors and successors (you can't even find these using TWS), or click on to the pop-up lists to get more information, e.g. general job data, resource information...

The screenshot displays the OPC/Graph 4.3 interface. At the top left is a network plan (Operation netplan) showing task dependencies. In the center is a Gantt chart (Barchart) with a time scale from 05 to 00. Below the Gantt chart is a list of job IDs: WV01199A, WV55502, WV76001, WV03010, WV50521C, WV55504, WV61726, WV50510, WV41200, WV55506, WV03014, and WV50521D. A callout bubble labeled "Job information" points to a detailed window for job WVT344FLZ. This window lists various attributes such as Application id, Op.no., Jobname, and dates. A second callout bubble labeled "Resources" points to a window showing a list of resources with columns for Name, Typ, Amount, and Keep. The resources listed include #KSAVE, &P1DB2.IIEF, &P1DB2.UAGV, &P1DB2.UFLO, &P1DB2.UMBV, &P1DB2.UQSA, &SYSR.P1DB2, and IOK.FLO.SPERRDS.

TWS/Graph can be used online or offline. You may give TWS information to departments without giving them any access to real data.

Interface between development and production

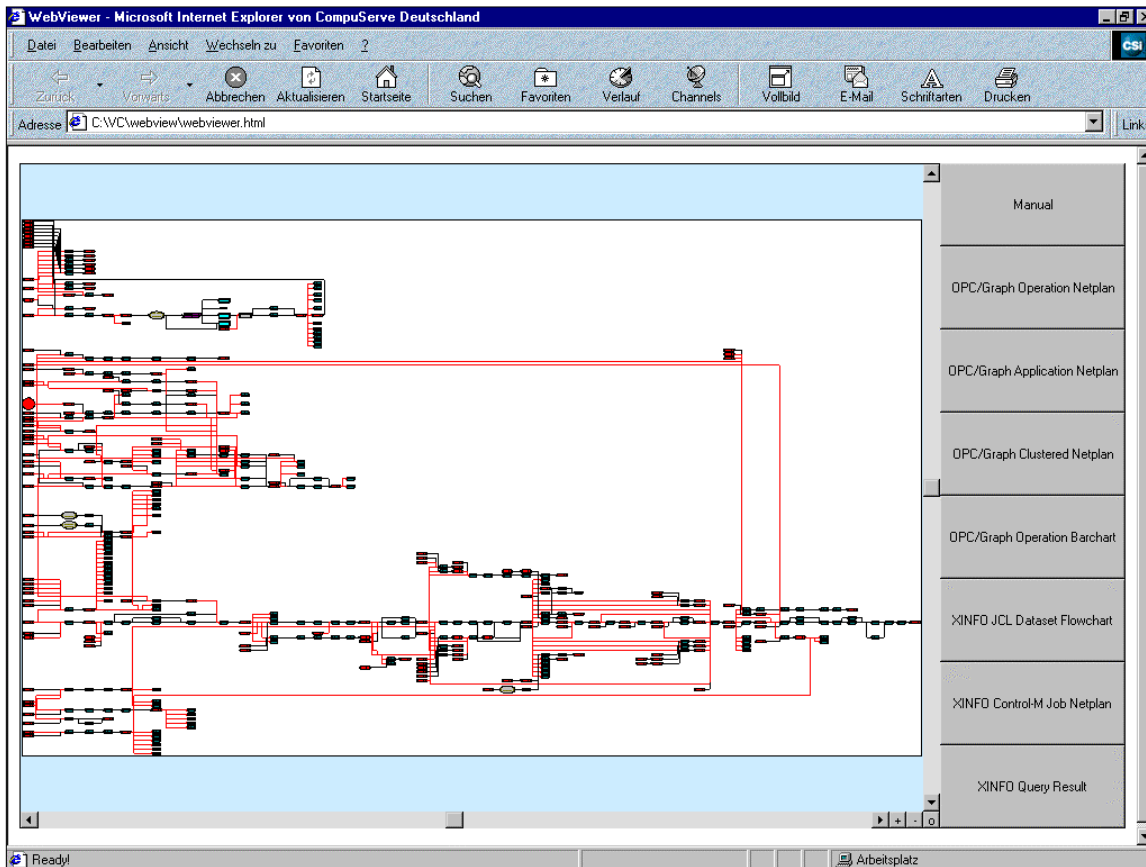
Application programmers can use TWS/Graph to graphically define a first draft layout of any new application. They can insert jobs and dependencies, without having to use additional software. Production personnel can correct these definitions, insert some special resources, run cycles etc. Finally, when the design has been approved, use TWS/Graph to update your original application description.²



² The update feature is currently only available for "TWS/Graph for zOS".

Java, HTML, Intranet and Internet

Use TWS/Graph to distribute your Netplans via the Internet or your Intranet. Use Explorer or Navigator to access Netplans from anywhere at anytime.



Visit our homepage and see an example: <http://www.horizont-it.com/>

Monitoring Production

Normally, Production is divided into organizational units. These include critical applications, backup jobs, jobs for different departments and so on. In larger organizations, different people will be responsible for the various areas of expertise. Therefore, users don't usually want to monitor all of the batch production; only those sections they are responsible for.

Using the status monitor, a structure that mirrors those responsibilities can be defined. Within this structure, operations and applications are assigned to groups and subgroups. Also, as only the applications and operations you wish to monitor are shown, each group and subgroup can contain any number of applications and operations.³

The image shows two windows from the OPC/Graph 4.3 application. The left window displays a tree structure of production units, and the right window displays an HTML status report.

Tree Structure:

- Produktion MUC
 - SAP Account
 - SAP 1
 - VBU2S01A
 - VBU2S01A
 - SAP
 - SAP 2
 - VBU2S01A
 - VBU2S01A
 - SAP
 - Backup
 - DB2
 - VBU2S01A
 - VBU2S01A
 - SAP
 - IMS

HTML Status Report:

OPC/Graph status report for Domain Test, created 28.11.2000, 17:06:27

| Description | Application id | Owner Id | Jobname | Op.no. | WS Id | Status |
|-------------|----------------|----------|---------|--------|-------|--------|
| SAP account | VBU2S01A | FIB | VBU2S01 | 010 | CPU | c |
| SAP account | VBU2S01A | FIB | VBU2S02 | 020 | CPU | c |
| SAP account | VBU2S01A | FIB | VBU2S03 | 030 | CPU | a |
| SAP account | VBU2S11A | FIB | VBU2S11 | 011 | CPU | a |
| SAP account | VBU2S11A | FIB | VBU2S12 | 012 | CPU | e |
| SAP account | VBU2S11A | FIB | VBU2S13 | 013 | CPU | w |
| SAP account | VBU2S11A | FIB | VBU2S14 | 014 | CPU | w |
| SAP account | VBU2S11A | FIB | VBU2S15 | 015 | CPU | w |
| Travel | VBU4R01X | RK | VBU4R01 | 010 | CPU | c |
| Travel | VBU4R01X | RK | VBU4R02 | 020 | CPU | a |
| Travel | VBU4R01X | RK | VBU4R03 | 030 | CPU | a |
| Travel | VBU4R01X | RK | VBU4R04 | 040 | CPU | a |
| Travel | VBU4R05X | FIB | VBU4R51 | 051 | CPU | w |
| Backup | VIN1A01C | INK | VIN1A02 | 001 | PREP | c |
| Backup | VIN1A01C | INK | VIN1A02 | 002 | CPU | c |
| Backup | VIN1A01C | INK | VIN1A03 | 003 | CPU | c |
| Backup | VIN1A01C | INK | VIN1A04 | 004 | CPU | a |
| Backup | VIN1A01C | INK | VIN1A05 | 005 | CPU | w |
| Backup | VIN1A01C | INK | VIN1A06 | 006 | CPU | w |
| Backup | VIN1A01C | INK | VIN1A07 | 007 | CPU | w |

Annotations:

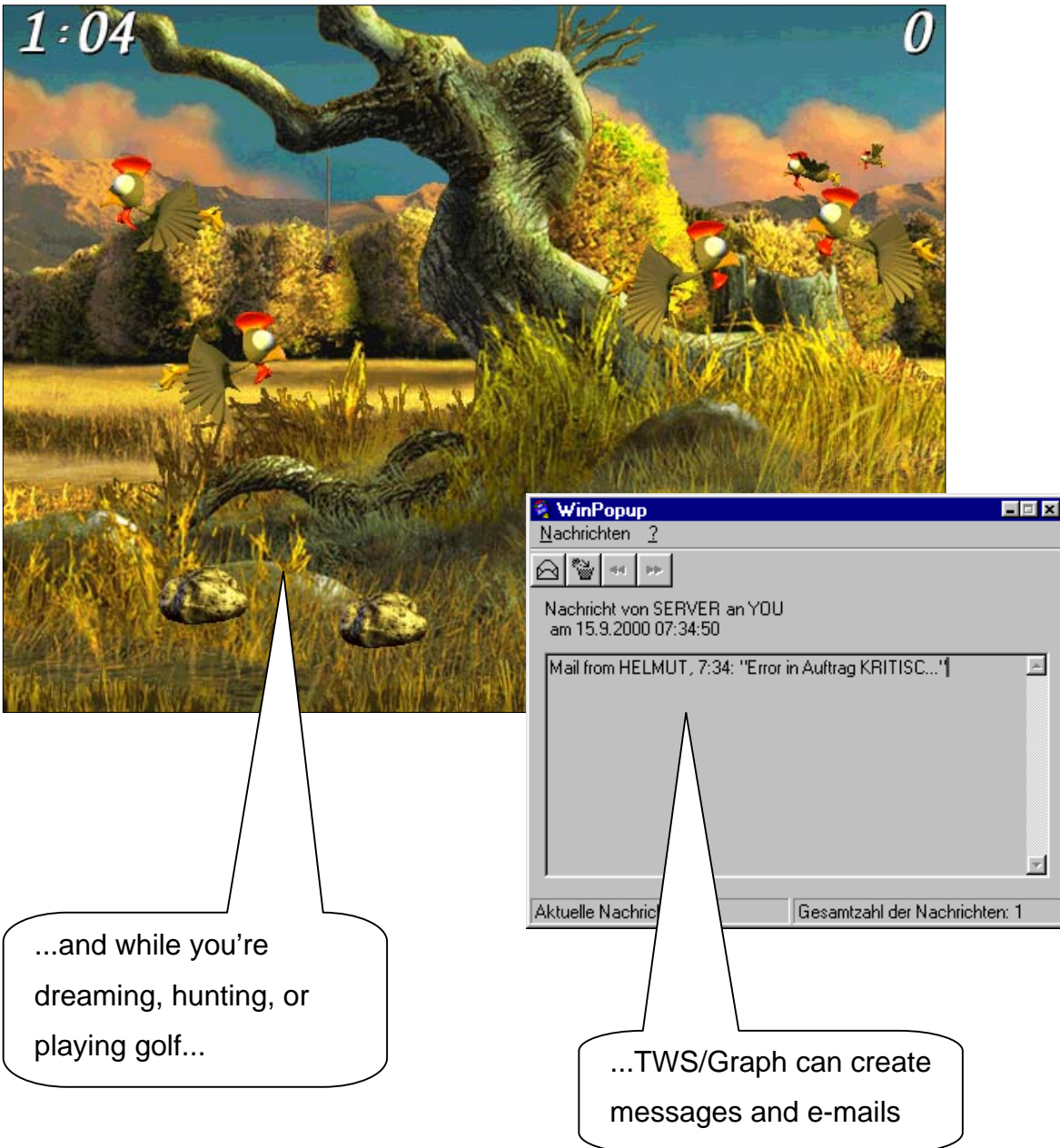
- The tree structure reflects the organization of your production
- HTML file, including status information, can be generated and updated automatically

³ The status monitor is only available for "TWS/Graph for zOS".

Generating Alerts

External programs can be called from TWS/Graph to create 'Alerts'. Messages concerning Jobname and Status can be sent via email to predefined recipients. ⁴

External programs can be used, in connection with the status monitor, to process regular checks of particular applications or jobs. Using an e-mail client, e-mails containing text, files, or a combination of both, can be created in TWS/Graph .



⁴ The status monitor and the alert function is only available for "TWS/Graph for zOS".

Automatic Documentation

The TWS/Graph Docu lists all information defined in the AD database. It can be generated in HTML format. The file includes information on the application, run cycle information, a calendar with all days on which the a run of an application is scheduled, operation information, predecessor and successor tables, special resources, operator instructions, and even the JCL of all operations including JCL procedures.⁵

The screenshot shows two windows. The top window is 'OPC/Graph 4.3.3 - [Application netplan C:\msdev\projects\opcgraph\VA_TEST.AD]'. It displays a network diagram with nodes and connections. A context menu is open over the diagram, listing options like 'Application info', 'Docu...', 'Run Cycles...', 'List operations...', 'Operation netplan', 'Predecessors', 'Successors', 'Pred and Succ', 'Navigator...', 'External programs...', and 'Edit'. The 'Docu...' option is highlighted. The bottom window is 'TWS/Graph HOR50DAY_A_711231 - Microsoft Internet Explorer'. It displays the following information:

APPLICATION: HOR50DAY **A 15.06.02**

| | |
|------------------|------------------------|
| Status | : A |
| Description | : HORIZONT Prod-Part 5 |
| Type | : A |
| Calendar | : DEFAULT |
| Valid | : 15.06.02 - 31.12.71 |
| Priority | : 5 |
| Owner | : HORIZONT |
| Ownertext | : |
| Auth. Group | : |
| Group Definition | : |
| Last update user | : P390K |
| Last update date | : 16.06.02 |
| Last update time | : 13:01 |

Below the text is a smaller network diagram showing nodes like 'HOR100DAY', 'HOR300DAY', and 'HOR50DAY' with their respective CPU requirements (e.g., 'HOR50000 116 CPU').

The resulting documentation, displayed with a standard Browser.

The documentation can be created automatically for thousands of applications. You can easily distribute TWS information via intra- or Internet!

⁵ The AD documentation is only available for "TWS/Graph for zOS".



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