

## **Tracer**

### **Program summary**

#### **Introduction:**

**Tracer** is originated in the need of managing the resolution of problems during tests.

During the test of a new products large amounts of problems are identified and reported. The test of a new product can exceed 1000 problem reports. Additional information is reported during the process of resolving these problems: status, commitments, design changes, engineering change level, management instructions, ... etc. An average of 4-5 updates is filed for each problem report, for some complex problems up to 20 updates may be filed!

With an increasing number of problems the amount of information gets quickly overwhelming. Nevertheless the success of the test depends on an accurate management of every single problem reported. Therefore, in large tests, the process of reporting and resolving problems requires the use of an information logging tool. **Tracer** is such a logging tool.

Though the scope of **Tracer** is not limited to this particular application - managing problem logs - let us use this particular application to illustrate the purpose of **Tracer**.

During the process of testing a problem report consists typically of a set of parameters such as title, originator, descriptive text, ... etc ... The analysis and resolution of the problem provides new information which increments the initial report: a report update is processed to reflect this new information. An update consists typically of modifications of the initial parameters (e.g. Status change) and of additional update parameters, such as author or descriptive text.

**Tracer** provides a structure to properly file all this information and a graphical user interface to interact with the stored data. Once filed every team member can retrieve this information, e.g.:

- latest status of every single problem at any point of time
- information, assumptions and commitments related to a specific problem
- management information: overdue commitments, unresolved problems, ... etc
- statistics concerning the progress of the problems reported

and manage the information according to his needs:

- file an update, e.g. state problem resolution or describing design changes ...etc.
- file comments, e.g. disagreement, commitment, ...etc.
- take appropriate action to speed up solutions which are urgent or late.

The benefit of the permanent availability of information through **Tracer** in a test can be considerable:

- ensure accuracy and diligence of problem resolution.
- maintain visibility of a complex environment with large amounts of asynchronous information.
- dispose at any time of the precise and formal status of every problem reported.
- have at any time a overall view of the test progress.

**General purpose application:**

The difficulty of maintaining a good visibility in environments with large amounts of asynchronous information, of course, is not restricted to test situations. Actually every professional has some proceedings to keep track of. For example:

- action plans.
- services.
- work orders.
- pendencies
- trouble reports
- complaints
- inquiries.
- administrative proceedings.
- information exchange.
- ... etc.

To cover the widest possible application range **Tracer** has been designed as a general purpose information tracking tool. Expressed in general terms:

**Tracer** is designed to provide real time control over the progress of events of any kind. This control is particularly interesting in cases where the amount of information is overwhelming or where accurate responsiveness is required.

**Tracer** provides the following services:

- “*Reports*” are processed: a sequential number is allocated to each “*Report*” and parameters such as: *Report number, Originator, Title, Date, Picture, Detail text* ... are filed
- “*Updates*” to these *Reports* are processed: a sequential number is allocated to each *Update*, locates the *Report* affected by the *Update*, updates it and files update *Attributes*, such as: *Update number, Author, Date, Summary of changes, Detail text*, ... etc.
- Utilities are provided to print *Reports*, calculate statistics.
- The **Tracer** can be customized to adapt to a particular environment.
- Interfaces are provided to customize **Tracer** windows and processing.

All data is filed in an Microsoft-Access database. Besides features specific to **Tracer**, Microsoft-Access provides a rich functionality for further information processing (Queries, Forms, Reports, Access and security management, interfaces to other applications, ... etc.).

## **Installing *Tracer***

*Tracer* requires Microsoft-Access.

*Tracer* is distributed as one file directory (named "Tracerx"), where x is the version of Microsoft Access required (e.g. Tracer7 requires Microsoft Access Version 7), with the following files:

- |                 |  |
|-----------------|--|
| 1) Reports.mdb  | Empty <i>Tracer</i> database   |
| 2) Reports.doc  | Program summary in Microsoft-Word 6.0 Format                               |
| 3) Reports.txt  | Program summary in ASCII TXT format  |
| 4) ReadMe.txt   | Information about latest version   |
| 5) Reports.mda  | Work group administrator (not provided for " <i>Individual licenses</i> ") |
| 6) Tutorial.txt | Step by step tutorial for introduction to <i>Tracer</i>                    |
| 7) Tracer.ico   | <i>Tracer</i> Icon   |

Copy Reports.mdb and Reports.mda from diskette to your hard disk.

### **Executing *Tracer* - Free evaluation licenses**

"Free evaluation licenses" can be operated either way: as "*Individual licenses*" or as "*Work group license*". If you are not familiar with *Tracer* you may wish to start with the easiest: bring it up as an "*Individual license*" and proceed step by step as described in file Tutorial.txt.

### **Executing *Tracer* - Individual licenses**

Double-Click on REPORTS.MDB or open Microsoft-Access from your Windows™ Program Manager. After completion of Microsoft-Access bring up, use the Microsoft-Access "File" menu to open the REPORTS.MDB database copied from your distribution diskette.

### **Executing *Tracer* - Work group licenses**

Open the "*Microsoft Work Group Administrator*" provided with your Microsoft-Access program package and link to the Reports.mda *work group* copied from the distribution diskette. (In MS Access 7.0 you can specify the argument /wrkgrp wga\_path in the command line, where wga\_path is the qualified path to your work group administrator. In MS Access 2.0 you can only specify /ini ini\_path, where ini\_path is the qualified path to your personal ini file. To create a personal ini file copy the MS Access ini file, e.g. c:\windows\msaccess20.ini, and alter the path to your work group administrator)

Once linked to the Reports.mda *work group*, open Microsoft-Access from your Windows™ Program Manager. You will be requested to enter *name* and *password*, enter "*Manager*" and leave the *password* blank. After completion of Microsoft-Access bring up, open the Reports.mdb database copied from your diskette using the Microsoft-Access "File" menu.

The database will complete initialization and display the main window of *Tracer*. You are now ready to fill this empty database with your own project information. Click on "*New Report(s)*" and enter your first *Report*.

### **Shared access to The *Tracer* databases**

Several participants of a projects can share simultaneous access to its *Tracer* database .

## **Functional features**

The *Tracer* functional features are mainly self explanatory. The following description is only provided to highlight peculiarities.

### **Program startup:**

The *Tracer* database completes start up with the *Main* window, also called “Control panel”.

### **Main window:**

The *Main* window is divided in three areas:

1. Lower half screen
2. Upper left quarter screen
3. Upper right quarter screen

#### **1. Lower half screen :** shows a summary of *Reports* filed.

The extreme left of the summary has a selector.

- Click once on the selector to display a summary of *Updates* applying to a particular *Report*.
- Double click on the selector to *Browse* a particular *Report*.

Right after the selector you will find a round button: this button permits to set *Switch 0* of a particular *Report*. Switch 0 is a convenience switch allocated to each user right after bringup. It permits to tag desired *Reports* and, later, to select them using the *Select* button.

The following color indicators are provided to highlight special events:

- in the first column a yellow arrow indicates that the *Report* has been updated.
- in column 2 or 3 a green ball indicates who “owns” the *Report*.
- *Severity* 1 is indicated with a 1 circled in red.
- *Checkpoint* overdue is indicated with a blue watch.
- Color indicators are provided for each customizable switch.

Click on the “*Select*” button to refresh the *Report* summary, if required.

#### **2. Upper right quarter screen:** shows a rectangle with controls fields for *Report* selection and sorting.

Specify here the values you are looking for. Note that clicking twice on a On/Off switch is not equivalent to one click on the “R” button. For example:

- one click on “*Overdue*” button sets the search value for “*Overdue*” *Reports*.
- a second click sets the search value for “*Not-Overdue*” *Reports*.

The “R” button right after the parameter box resets the input in the corresponding box to Null.

The “*Reset*” button resets all selection input and the “*Select*” button starts *Report* selection.

The selection buttons over “*Sort*” indicate the first and second sort arguments.

#### **3. Upper left quarter screen:** shows a series of buttons for *Report* processing.

The “*UI*” and “*U2*” buttons open windows designed for custom needs. A click on these buttons opens respectively “*UserUtility1*” and *UserUtility2*” which may be edited and modified by users logged on to Microsoft-Access in the *Managers* group. In the distribution diskette this utilities contain respectively:

- An example of how to create a for invoking *Report* or *Update* information
- A very useful utility to print a report summary and file it in ASCII format. Try it!

*R0/S0 start* an utility which resets/sets *Switch 0* of all *Reports* selected.

Press “*Others*” to display a summary of other processing options.

**Customize window:**

The *Customize* window comes up after the user pressed the “*Customize*” button. In this window users belonging to the *Managers* group can customize his **Tracer** database:

- Establish the reporting language.
  - Establish a project password required from any user when accessing the project database.
  - Define the latency for setting a checkpoint after opening a *Report* and after changing its status.
    - Define the label of customizable *Report* parameters such as:  
*Parameter1, ..., Parameter5, Switch1, ... Switch5, Date1, Object*  
 and customizable *Update* attributes such as:  
*Attribute1, ... Attribute3, Indicator1, ... , Indicator3*
- If the label of any of these attributes is left blank the attribute will not be displayed.
- Define the valid values of the following parameters: *Originator (User), Assigned (User), Status, Area, , Parameter2 / ... / Parameter5, Author (User) and Attribute2 / ... / Attribute 3*.  
 (The value of *Status, Area, Parameter2, Parameter4 and Attribute2* are exclusive, thus only these predefined values can be provided as input. The values of *User, Parameter3, Parameter5 and Attribute3* are not exclusive).  
 Note here that the parameter “*Status*” has two subcategories:
    - “*ClosedStatus*”: status associated with a Report closure, such as “Close” or “Drop”.  
 A status identified as *ClosedStatus* can only be attributed to a Report by the Originator himself or by an user belonging to the Managers group (see below).
    - “*OpenStatus*”: status not associated with a Report closure, such as “Pending” or “Delayed”, ... etc.

The *Customize* window is only accessible to users connected to Microsoft-Access in the “*Managers*”group, typically project managers.

**Using Tracer in a work group (Not for Individual licenses)**

Several participants of a projects can share simultaneous access to its **Tracer** database. The *Work group license* establishes a discipline in the access of **Tracer** data. It defines various user groups with a distinct access authority for each group.

The following groups are predefined:

- **Managers:** typically managers of a project.  
 A sample user ID, called “*Manager*”, is initially established in this group Its password is initially set to blank.  
*Managers* have access to all functional features of **Tracer**. In particular he is authorized to access the “*Customize*” window (designed to allocate valid *Parameter* values and *Parameter* labels) and the “*Edit*” window (designed to modify *Reports* without using “*Update*”). *Managers* are not authorized to access structures and code of the **Tracer** program.  
 Users registered as *Managers* must also be registered as *Administrator*.
- **Reporters:** typically users issuing and closing reports.  
 A sample user ID, called “*Reporter*”, is initially established in this group. Its password is initially set to blank.  
*Reporters* have the same access authority as *Managers* but are not authorized to use the *Customize* and *Edit* windows.
- **Performers:** typically information providers of the project.

A sample user ID, called “*Performer*” is initially established in this group. Its password is initially set to blank.

*Performers* have the same access authority as *Reporters*, but are not authorized to *Open* or *Close* reports.

- **Observers:** typically information receivers.

A sample user ID, called “*Observer*” is initially established in this group. Its password is initially set to blank.

*Observers* have read-only access to Reports and Updates. They are not authorized to alter Report parameters but are authorized to file comments to Reports.

- **Administrators:**

*Administrators* do not have the authority to open **Tracer** databases. The user *Administrators* have merely the authority to administrate the allocation of new user Ids. The users “*Admin*” and “*Administrateur*”, with initial password 1111, can only access **Tracer** databases of “*Individual licenses*”.

### **Administration of database access:**

Users pertaining to the *Administrators* group can administrate the access to the database using the Microsoft-Access Security menu. (Close the main window using the File menu of the menu bar). When adding users to your Work group do not forget to register them as member of one of the groups provided.

**Note:** Users registered as *Managers* must also be registered as *Administrator*.

Once connected to Microsoft-Access every user can modify his password using the Microsoft-Access Security menu on the database main window.

Remove the users IDs *Manager*, *Report*, *Performer* and *Observer*, and modify the password of *Administrators* to prevent undesired access to your database through these default IDs.

### **Security of project databases**

Use “*Customize*” to allocate a project password. The project password is initially set to Null, corresponding to no project password protection. No project password can be allocated in *Individual licenses*.

### **Name and address table**

User information such as full name, address, telephone, ... can be stored and retrieved by double clicking on name fields such as “*Originator*” or “*Assigned*” or “*Author*”.

New address records can be created by users of any group. Existing address records can only be updated by users pertaining to the “*Managers*” group or by the user himself.

Instead of using a separate name table for each project database the name table can be deleted and a single name table, common to all projects, can be linked using the Microsoft Access “Annex table” feature.

### **Broadcasting**

The event of opening a new Report or filing an Update may be broadcasted through E-Mail. To enable broadcasting open your “*Customize*” window and set the broadcasting switch.

To enable transmission of this message to Internet the module “Broadcast” must be edited and proper communication code must be included, depending on the communication application used by your system. **Tracer** feeds the proper message and distribution list to the module “Broadcast”.

The event of opening or updating a Report will be communicated to:

- All users with information receiver switch set in the Name table
- The Originator of the Report, provided his E-Mail address is provided in the Name table
- The Assigned of the Report, provided his E-Mail address is provided in the Name table
- If Parameter5 is named as “CC” to all users, separated by a comma, listed in Parameter5

- If Attribute3 is named as “CC” to all users, separated by a comma, listed in Attribute3

### **Ordering**

To display license information and/or print the order form click “License” in the main window.

### **Migration of data from an earlier version to this new version.**

The software level of your **Tracer** version is identified in the license number by the two digits between the series number xx and the sequential number nn: e.g. AB-11-53 has the software level 11.

Level 11 of **Tracer** is fully compatible with previous levels.

If you desire to migrate old **Tracer** tables to this new software level please follow the following sequence:

- Copy Reports.MDB from your distribution diskette to your hard disk and open it.
  - Exit the main window using the Microsoft-Access menu bar (File/Close). The Microsoft-Access database window will be displayed.
  - Erase the *Reports* and *Updates* tables from this empty database. (Delete the relationship between the "Reports" and "Updates" tables as requested by Microsoft-Access)
  - Import the *Reports* and *Updates* tables from your old database.
  - Erase the *Processes*, *ParmValueTable* and *AddressTable* tables from this empty database
  - Import the *Processes*, *ParmValueTable* and *AddressTable* tables from your old database.
  - Restore the relationship between the "Reports" and "Updates" tables using *Edit/Relationship*. The relationship applies to "ReportNumber" from the "Reports" to the "Updates" table, specifying "One to Various" and "Impose reference integrity" in the Relationship window which pops up when you create the relationship.
  - Restore access security. If you have a *Work group license*, watch that, after import, all imported tables are fully accessible to "Reporters", "Performers" and "Observers". This might be undesirable. You can restore access security by entering *Security/Permissions* in the Microsoft-Access database window, reset the authority of "Reporters" and "Performers" to:
    - . *Read, Alter and Insert* for *Reports*
    - . *Read, Alter, Insert and Delete* for *Updates*
- For "Observers" reset the authority to:
- . *Read* for *Reports*
  - . *Read* for *Updates*

### **Trouble ?**

If you have difficulties of any kind using **Tracer** please contact the distributor of your license or send mail to:

Instituto de Planejamento de Projeto - i2p Ltda.  
Rua Olavo Bilac, 88 - Apto. 101  
13024-110 Campinas S.P. Brazil  
Tel/Fax: (00-55-19)-253.19.99  
E-Mail: rene.fickinger@mpcbbs.com.br

You may desire to be informed about updates of **Tracer** or to send your comments. In this case please send a formless letter to the above address by specifying the license number of your version. I am looking forward to receive your letter.

Good success with the **Tracer** !!!