Instructions for Using the TSPi Support Tool

Overview

Introduction

The TSPi support tool, TSPi.xls, was developed to provide automated support for the Team Software Process course described in the companion textbook, *Introduction to the Team Software Process.*

The support tool is implemented as a Microsoft Excel workbook.

Project team support

The TSPi support tool helps the project team

- Plan the project

- Track the project schedule

- Track the project quality plan

Minimum system configuration

TSPi.xls requires Microsoft Excel, version 97SR-1 or a later version.

Disk space requirements will depend on the amount of data entered. A minimum allocation of 3MB for each copy of the tool is recommended.

Each project team will require one copy for each team member and two copies for the team.

Installation

To install the workbook, load the file TSPi.xls on your hard drive.

Startup

Open the file TSPi.xls to start up the support tool.

Step-by-step instructions

Step-by-step instructions for using the support tool can be found in this document and in the TSPi support tool on the worksheet tab labeled **Instructions**.

Forms overview

The TSPi support tool includes these forms:

- LOGD: Defect Recording Log

- LOGT: Time Recording Log

- SCHEDULE: Schedule Planning Template

- SUMQ: Quality Plan Summary

- SUMP: Program Plan Summary

- SUMS: Size Summary

- TASK: Task Planning Template

- ROLE: Team Roles

Planning overview

Plans are produced at the beginning of each cycle during the planning phase of the TSPi.

Three types of plans are produced during the planning phase.

1. A top-down team plan for the cycle. The top-down plan starts the planning process and provides a basis for creating the individual plans and the consolidated team plan.

2. Individual plans for each team member. Individual plans are based on the top-down plan tasks that are assigned to each team member. They support planning and tracking at the individual level.

3. A consolidated team plan that integrates the individual team member plans. The consolidated plan reflects the plans and commitments of each team member. The consolidated plan is used for tracking.

A separate copy of the support tool is used for the top-down plan, each team member's plans, and the consolidated plan.

Tracking overview

Project status is reported at the weekly status meeting. Status is based on data gathered by each team member. Team members record these data in their own copy of the support tool workbook.

The data are:

1. **Size:** The measured size of each product is entered on the worksheet **SUMS**.

2. **Time:** Development time is entered on the worksheet **LOGT**.

3. **Defects:** Defects are entered on the worksheet **LOGD**.

4. **Task Completion:** The completion date for each task is entered on the **TASK** worksheet

These data are then automatically integrated into the consolidated team plan to produce team status. The planning manager is responsible for consolidation.

Project status worksheets

The following worksheets show the status of the project:

- PROJECT: Includes a project information box and five charts for analyzing project schedule and product quality.

- SCHEDULE: Includes planned and actual hours per schedule week.

- SUMQ: Includes planned and actual process and product quality measures.

- SUMP: Includes planned and actual size, planned and actual time in phase, planned and actual defects injected by phase, and planned and actual defects removed by phase.

- SUMS: Includes plan and actual size for each part and assembly.

- TASK: Includes estimates, planned date, actual hours, and actual date for each task.

Project status charts   The project worksheet includes five analysis charts.

- Earned Value: Plots cumulative planned, earned, and predicted value for each project week.

- Plan versus Actual Hours: Plots cumulative planned and cumulative actual hours for each project week.

- Defect Removal Profile: Plots defects removed per KLOC, for each defect removal phase, for any assembly.

- Quality Profile: Plots performance against five quality benchmarks for any assembly.

- Percent Defect Free: Plots the percentage of the system that is free of defects at key points in the process.

Displaying and printing the analysis charts

A set of four controls—two drop-down menus and two buttons—on the PROJECT worksheet control the analysis charts.

- Part/Level drop-down menu: Selects the part or assembly to display, or all parts and assemblies if SYSTEM is selected.
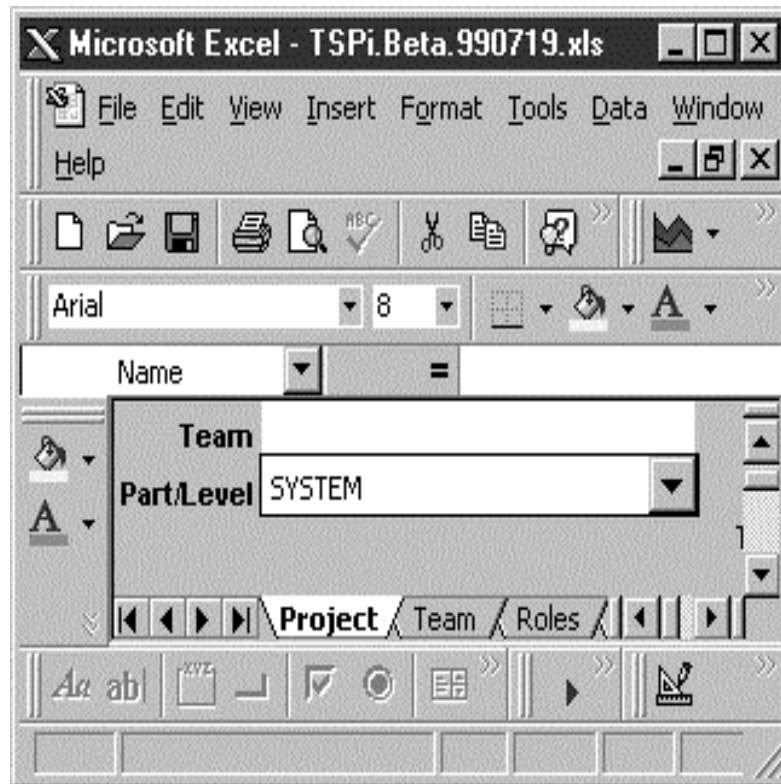
- Chart drop-down menu: Selects one of the five charts.

- Draw Chart button: Forces the selected chart to be redrawn.

- Print Chart button: Prints the selected chart.
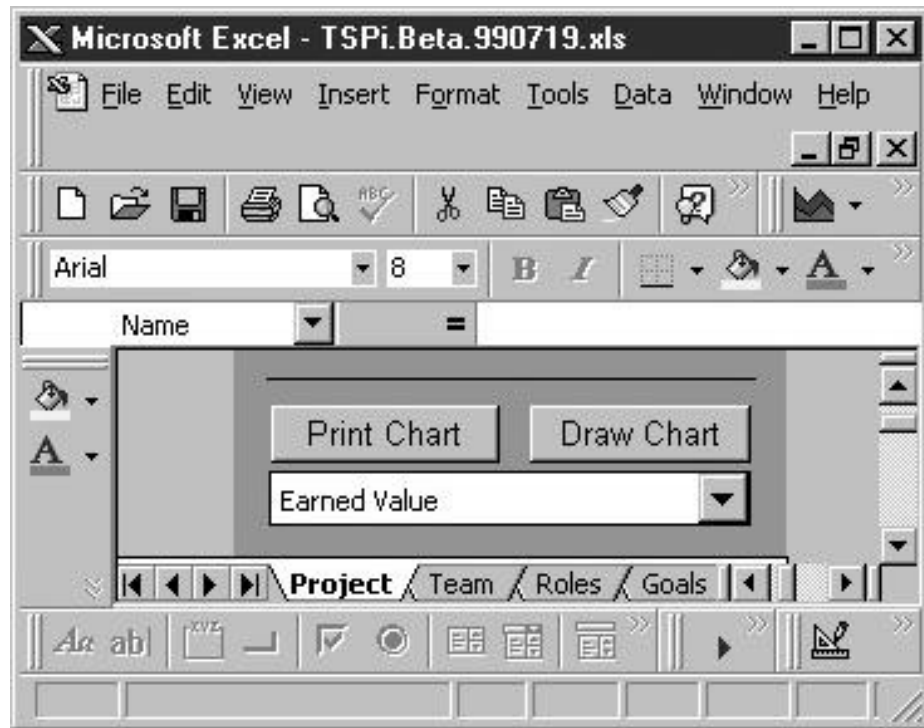
Project Planning

When are project plans produced?

Project plans are produced during the TSPi development strategy and planning sessions at the start of the project.

During the first development cycle, the STRAT1 and PLAN1 scripts are used. For subsequent cycles the STRATn and PLANn scripts are used.

Since tool use is identical in both cases, first-cycle scripts are referenced hereafter. Each subsequent cycle is treated as a new project.

How are project plans produced?

The process scripts STRAT1 and PLAN1 describe how plans are produced. The tool facilitates this process by providing support for key planning forms, such as TASK and SCHEDULE.

*(A detailed description of how to use the TSPi.xls workbook to support planning is included below and in the workbook. See the worksheet labeled **Instructions**.)*

Starting the plan

Before the first team session (STRAT1 meeting) the team leader should prepare a workbook for the team.

1. Select the PROJECT worksheet and enter your name, the project name, the team name, and the Monday date for the starting week in start date, the instructor name, and the cycle number.

2. Next, select the TEAM worksheet and enter each team member's name, initials, phone number, and e-mail address.

3. Next, select the ROLES worksheet and enter the role assignments for the current cycle.

Updating the plan during the STRAT1 meeting

During the STRAT1 meeting, the planning manager updates the workbook as the planning proceeds.

1. Enter the assembly names, parts names, and size estimates on the SUMS worksheet.
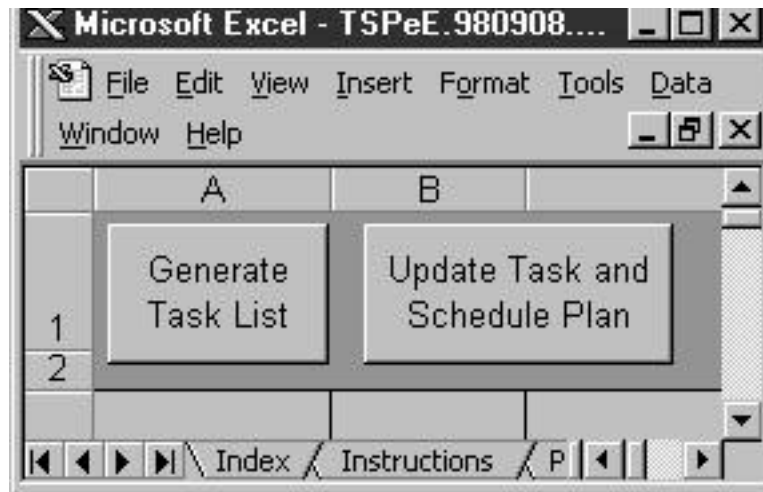
Creating the team TASK and

During the PLAN1 meeting, the planning manager enters task and

SCHEDULE plan　　　schedule information on the TASK and SCHEDULE plan worksheets in the team's workbook.

1. First, select the TASK worksheet and click the Generate Task List button to create a default task list from the defined assemblies and the standard TSPi process steps.

2. Next, Revise the task list as needed and make a size estimate for tasks where appropriate.

3. Next, estimate the hours for each task and, where known, the hours for each engineer under his or her assigned role.

4. Now select the SCHEDULE worksheet and enter the total available hours for the team, by week.

5. Next, select the TASK worksheet and click the Update Task and Schedule Plan button to generate a plan.

Producing the quality plan　　　Once the team task and schedule plan has been completed, the team produces the quality plan. (*Review the quality standard in the textbook before entering the quality plan data.*)

1. First, select the SUMQ worksheet and enter the planned defect injection rates for each phase.

2. Next, enter estimated phase yields for each phase.

3. Now review the calculated defect removal rates and defect densities (Defects/KLOC) against the Quality Standard. If necessary, adjust planned time (TASK worksheet), defect

injection rates (SUMQ), or defect removal yields (SUMQ).
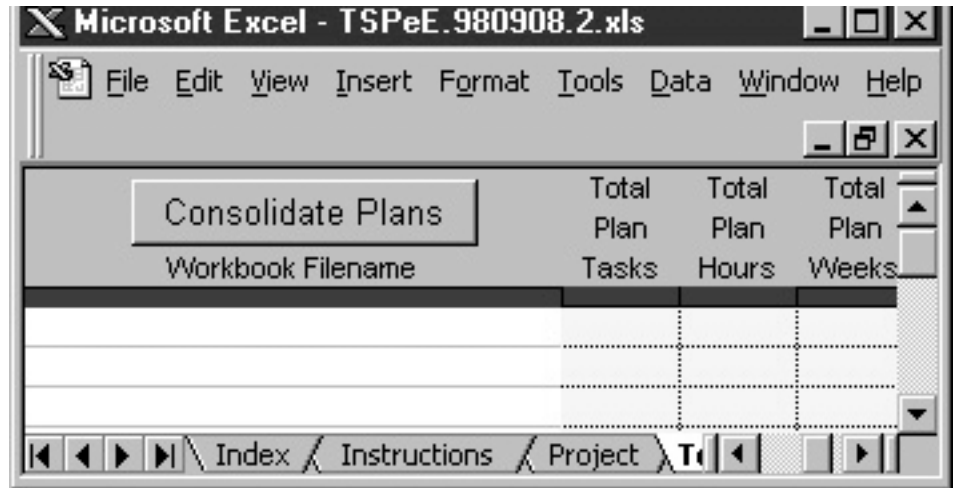
Creating individual TASK and SCHEDULE plans

After the team task and schedule plan has been created, each team member prepares a personal task and schedule plan.

1. The team leader makes one copy of the team workbook for each team member, enters the filenames of these workbooks in the Workbook Filename column on the TEAM worksheet, and distributes the copies to the team members.

2. Next, each team member enters his or her name in the PROJECT worksheet of his or her personal workbook.

3. Next, each team member edits the task list in his or her personal workbook, deleting tasks not assigned to him or her, entering 0 hours for other engineers assigned to the same tasks, and adding and estimating any additional tasks he or she believes are required.

4. Finally, each team member revises the SCHEDULE worksheet to reflect his or her available hours and then clicks the Update Task and Schedule Plan button on the TASK worksheet to generate the schedule.

Creating the consolidated plan

After individual task and schedule plans have been created, the team prepares a consolidated team task and schedule plan.

1. The team reviews the task and schedule plans for all team members to see if they are balanced. If they are not balanced, reassign tasks among the engineers and repeat steps 3 and 4 of the previous section, **Creating Individual TASK and SCHEDULE Plans**.

2. When the individual plans are balanced, the planning manager makes a copy of the team's top-down plan workbook for use in producing the consolidated plan.

3. The team members' individual worksheets are then loaded into the same folder or directory as the team's consolidated plan.

4. Next, open the workbook for the consolidated team plan and click the Consolidate Plans button on the TEAM worksheet to build the consolidated plan.

5. Check again to ensure that the plan is balanced, and, if
    necessary, reassign tasks and repeat steps 3 and 4 of the
    previous section, **Creating Individual TASK and
    SCHEDULE Plans**. Then return to step 3 of this section.

6. If the planned time for any task is changed, repeat step 3 of the
    section, **Producing the Quality Plan**.

Tracking the Project Schedule

When is the schedule updated? The project schedule is updated weekly before the weekly project meeting.

Which charts and worksheets are used to track schedules? Schedules are tracked with the following charts and worksheets.

- Earned Value chart

- Planned and Actual Hours chart

- PROJECT worksheet

- TASK worksheet

- SCHEDULE worksheet

- SUMP worksheet

- SUMQ worksheet

- SUMS worksheet

How do team members prepare their individual status reports? Use the following procedure to generate team member status.

1. Ensure that all time entries in the **LOGT** worksheet for the current period are complete and accurate.

2. Ensure that the completion dates for all completed tasks have been entered in the **TASK** worksheet.

3. Ensure that actual size measures for all assemblies in the **SUMS** worksheet are complete and accurate.

4. Click the **Update Project** button on the **PROJECT** worksheet.

5. Select the **Earned Value** chart on the **PROJECT** worksheet. Click the **Draw** button, and then click the **Print** button.

6. Select the **Planned and Actual Hours** chart on the **PROJECT** worksheet. Click the **Draw** button, and then click the **Print** button.

7. Print the **TASK** and **SCHEDULE** worksheets.

How is the team's schedule status report prepared?

Use the following procedure to generate the team's status.

1. Ensure that all team members have updated their individual workbooks using the above procedure.

2. Ensure that the updated team member workbooks are saved in the same directory as the team workbook.

3. Click the **Consolidate** button on the **TEAM** worksheet.

4. Select the **Earned Value** chart on the **PROJECT** worksheet. Click the **Draw** button and the **Print** button.

5. Select the **Planned and Actual Hours** chart on the **PROJECT** worksheet. Click the **Draw** button and the **Print** button.

6. Print the **TASK** and **SCHEDULE** worksheets.

7. Select the **SUMP** worksheet and print each assembly, including **SYSTEM**.

Tracking the Project Quality Plan

When is the quality plan updated?

The project quality plan is updated weekly before the weekly project meeting.

Which charts and worksheets are used to track quality?

Quality is tracked with the following charts and worksheets.

- Defect Removal Profile chart

- Quality Profile chart

- Percent Defect Free chart

- SUMP worksheet

- SUMQ worksheet

- SUMS worksheet

How do team members prepare their quality status report?

Quality status is reported for each product assembly. Use the following procedure to generate a team member status report for all assigned assemblies.

1. Ensure that all defect entries in the **LOGD** worksheet for the current period are complete and accurate.

2. Ensure that actual size measures for all assemblies in the **SUMS** worksheet are complete and accurate.

3. Click the **Update Project** button on the **PROJECT** worksheet, then repeat steps 4 to 7 for each assembly assigned to the team member.

4. Select the **Defect Removal Profile** chart on the **PROJECT** worksheet. Click the **Draw** button and the **Print** button.

5. Select the **Quality Profile** chart on the **PROJECT** worksheet. Click the **Draw** button and the **Print** button.

6. Print a **SUMP** worksheet for each assembly.

7. Print a **SUMQ** worksheet for each assembly.

How is the team's quality status report prepared?

Quality status is reported for each product assembly. Use the following procedure to generate the team's status.

1. Ensure that all team members have updated their individual workbooks using the above procedure and that the updated team member workbooks are saved in the same directory as the team workbook.

2. Click the **Consolidate** button on the **TEAM** worksheet, and then repeat steps 3 to 7 for each assembly.

3. Select the **Defect Removal Profile** chart on the **PROJECT** worksheet. Click the **Draw** button and the **Print** button.

4. Select the **Quality Profile** chart on the **PROJECT** worksheet. Click the **Draw** button and the **Print** button.

5. Select the **Percent Defect Free** chart on the **PROJECT** worksheet. Click the **Draw** button and the **Print** button.

6. Print a **SUMP** worksheet for each assembly.

7. Print a **SUMQ** worksheet for each assembly.

User Interface Features

The user interface   The user interface incorporates several custom features of Microsoft Excel.

- Cell protection

- Background color

- Default values

- Automatically calculated cells

- Shortcut menus

- Chart Wizard

- Visual Basic (VB) macros

Review the following topics before using the TSPi workbook.

Worksheet protection and locked (protected) cells   Worksheet cells that should not be changed by the user are locked wherever possible. This prevents the user from inadvertently modifying cells that should not be changed.

Worksheet protection can be turned off temporarily using the Tools/ Protection menu item, but on some worksheets a VB macro may turn protection back on whenever a cell is changed or a new cell is selected.

Avoid changing worksheet protection or the protected status of cells without a clear understanding of the possible side effects.

Cell background color   Cell background colors are used to indicate which cells the user must complete and which cells contain calculated values or formulas.

- Cells with a white background contain values the user must supply.

- Cells with a light-yellow background contain calculated values or formulas.

- Cells with a blue background are labels or form areas. Do not type in these cells.

Cell formulas and links   Most worksheet calculations are handled by VB macros instead of Excel worksheet formulas. Some cell formulas or links are actually inserted by VB macros. Changing cell formulas may not produce a long-term change, because the VB macros may overwrite any changes you insert.

Default values   A default value is a predefined value that is inserted into an empty cell when you select the cell. In general, this action is triggered only if valid data have been entered in the preceding rows and the preceding cells in the current row.

Example 1. Selecting the date cell in a LOGD worksheet row automatically enters today's date.

Example 2. Selecting an empty assembly, phase, or task cell in a LOGD worksheet row automatically inserts, as a default value, the corresponding value from the same column in the previous row, but only if the preceding items (assembly, phase, and task) are not blank.

Overriding defaults. Type over the value in the cell.

Restoring defaults. Delete the value in the cell, then reselect the cell.

Individual worksheet instructions provide specific descriptions of the default values for each worksheet cell.

Automatically calculated cells   An automatically calculated cell is a cell whose value can be computed based on other cells in the same row.

Example 1. Delta Time on the LOGT worksheet can be calculated from the values in cells Start, Interrupt, and Stop.

Delta Time = Stop – Start – Interrupt

This feature is *not* the same as an Excel cell formula. Whenever the source values change, a procedure is called to recalculate the affected cell.

Example 2. Changing Start, Stop, or Interrupt will cause Delta Time to be recalculated.

Do not try to override automatically calculated cells.

Shortcut menus   Context-sensitive shortcut menus are provided for entering lists of data, such as defect types and task names.

Shortcut menus are activated by a click of the right mouse button. Shortcut

menus contain context-sensitive actions for the item underneath the cursor.

User Interface Constraints

Impact on the Excel user interface	Some custom features of the user interface affect the standard user interface for Excel.

- Copy and Paste

- Multiple selections

- Inserting, deleting, copying, or moving rows

- Inserting, deleting, copying, or moving columns

- Customizing/using TSPi.xls worksheet data

Copy and Paste	Copy and Paste may not work between worksheets or workbooks. Event-driven VB macros triggered by changing the displayed workbook may cause the area selected for Copy to change, which will affect the Copy and Paste commands.

Copy and Paste within a worksheet may also be affected.

Multiple selection	Editing operations involving multiple selections (more than one worksheet cell) may produce different results or may not be allowed.

Also, automatic calculations may not work when a range larger than a single cell is changed. Each cell may need to be edited separately.

Inserting, deleting, copying, or moving rows	Editing by inserting, deleting, copying, or moving entire rows is allowed on some worksheets. Excel row and column headings are not displayed when row editing is not allowed; they are displayed when row editing is permitted.

See the detailed instructions for the worksheet.

Inserting, deleting, or moving columns

Inserting, deleting, or moving columns will destroy the workbook and are not recommended.

See **Customizing/using TSPi.xls worksheet data**, below.

Customizing/using TSPi.xls worksheet data

Modifying TSPi.xls worksheets may cause the custom workbook software to fail and/or corrupt the data in the worksheets.

To access data in the workbook, create a new workbook and use cell references to the TSPi.xls worksheets to access the data required for the enhancement.

Example: To add a feature that shows the ratio of interrupt time to elapsed time worked for a LOGT worksheet entry, create a new workbook and a formula like the one below. Refer to the TSPi data.

=[TSPi.xls]LOGT!F2/[TSPi.xls]LOGT!H2

TSPi.xls Worksheets

Worksheet forms support   TSPi.xls includes these TSPi forms implemented as worksheets.

1. Defect Recording Log (LOGD)

2. Time Recording Log (LOGT)

3. Schedule Plan Template (SCHEDULE)

4. Program Plan Summary (SUMP)

5. Quality Plan Summary (SUMQ)

6. Size Summary (SUMS)

7. Task Plan Template (TASK)

Other worksheets included with TSPi.xls, and their purposes, are as follows.

1. Instructions: step-by-step instructions for planning and tracking

2. Project: a project summary

3. Team: team member information

4. Roles: role assignments

5. Defect Types: the defect types allowed on the LOGD worksheet

6. QprofParam: the parameters used for calculating the five points on a quality profile chart

The LOGT Worksheet

Overview   The LOGT worksheet implements the TSPi LOGT form.

Data entered by the engineer on this form are rolled up to worksheets TASK, SCHEDULE, and SUMP.

Delta time   Delta time is automatically calculated when start time, interrupt time, and stop time have been entered.

Delta time is recalculated when any of these values is changed.

Shortcut menu   Use the shortcut menu (accessed by clicking the right mouse button) to enter assembly names, phase names, and task names.

Using the shortcut menu to enter a task name will enter the assembly name and phase name automatically if these fields are blank.

Application note   To enter time for a task that is already completed, such as a task that is conducted away from your computer (for example, an inspection meeting),

1. enter the assembly, phase, and task;

2. enter the desired date, start time, and stop time in these fields; include any interruption time;

The Delta time will be calculated automatically.

Fields   The following table describes the fields on the LOGT worksheet.

Field	Contents	Default Value or Calculated Value
Assembly	Assembly name (use the shortcut menu)	Defaults to value in prior row
Phase	Phase name (use the shortcut menu)	Defaults to value in prior row
Task	Task name (use the shortcut menu)	Defaults to value in prior row

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Date	The start date	Defaults to the current date
Field	**Contents**	**Default Value or Calculated Value**
Start	The start time	Defaults to the current time
Int.	The total minutes of interruption time; any number <= (stop – start)	
Stop	The stop time	Defaults to the current time
Delta	Elapsed minutes – interrupts	Calculated as *stop-start-interrupts*
Comments	Any comments	

The LOGD Worksheet

Overview   The LOGD worksheet implements the TSPi LOGD form.

Data entered by the engineer on this form are rolled up to the SUMS, SUMP, and SUMQ worksheets.

Shortcut menu   Use the shortcut menu (accessed by clicking the right mouse button) to enter assembly names, phase names for phase injected and phase removed, and defect types.
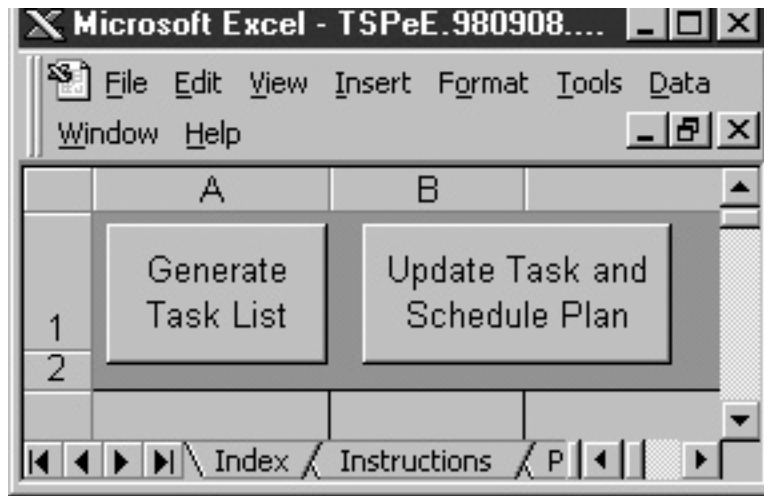
Controls   None

Fields   The following table describes the fields on the LOGD worksheet.

Field	Contents	Default Value or Calculated Time
Date	A valid date	Defaults to the current date
Num		Calculated sequence of defect numbers
Type	A defect type (use the shortcut menu)	Defaults to value in prior row
Assembly	An assembly name (use the shortcut menu)	Defaults to value in prior row
Injected	A phas e name (use the shortcut menu)	Defaults to value in prior row
Removed	A phase name (use the shortcut menu)	Defaults to value in prior row
Fix Time	A numeric value	
Fix Ref.	A valid defect number	
Description	A description of the defect	

The TASK Worksheet

Overview

The TASK worksheet implements the TSPi Task Planning template.

This worksheet is used in conjunction with the SCHEDULE worksheet to produce the TSPi task and schedule plans.

Size and time estimates

Size and time estimates are entered on the TASK worksheet.

1. Enter the Size, Size Measure, and Rate, and the spreadsheet will calculate Estimated Hours.
   Estimated Hours = Size / Rate

2. Enter the number of hours for each engineer by role to calculate planned hours.

3. Alternatively, enter the plan hours directly.

Application note

Because a task's plan hours are the sum of the planned hours by role, an engineer's task plan should include only his or her planned hours on a task.

Task completed

When tasks are 100% complete, enter the actual date, and the worksheet will calculate the actual week.

Shortcut menu

Use the shortcut menu (accessed by clicking the right mouse button) to enter assembly names and phase names.

Controls

The TASK worksheet has two controls.

1. Generate Task List: This control builds a default list of tasks on the TASK worksheet. The task list is derived from the TSPi process and the assemblies on the Assembly worksheet.

2. Update Task and Schedule Plan: This control updates the TASK and SCHEDULE worksheets with development time data from LOGT, recalculates earned value based on the date tasks were finished (Actual Date), and updates the predicted

earned value.

Fields   The following table describes the fields on the TASK worksheet.

Field	Contents	Default Value or Calculated Value
Assembly	Phase name (use the shortcut menu)	Defaults to value in prior row
Phase	Phase name (use the shortcut menu)	Defaults to value in prior row
Task	The name of the task	Defaults to *Phase Name + Assembly Name*
Plan Hours by Role	The plan hours per engineer, by role	
Est. Size	The estimated size	
Size Measure	Text Pages, Requirements Pages, HLD Pages, DLD Lines, LOC, or a user-defined measure	
Rate	A development or production rate, for example, 20 LOC/Hour	
Estimated Hours	A calculated or user-entered value	Calculated as *Size / Rate*
Plan Hours	A calculated or user-entered value	Sum of plan hours for each role
Actual Hours	Actual hours for this task from the LOGT worksheet	Calculated from LOGT as *Sum(DeltaTime)* for the task
Actual Date	The date the task was completed	Defaults to the current date

Calculated fields   The following table describes the calculated fields on the TASK worksheet. **Do not enter data in calculated fields** .

Field	Contents	Calculated Value
Actual Week	The project week for Actual Date	Calculated based on Start Date and Actual Date
EV	Earned value	Based on PV
Cum EV	Cumulative EV value	Cumulative total
Cum Plan Hours	Cumulative plan hours	Cumulative total
PV	Plan value	*Plan Hours/Total Plan Hours*
Plan Week	Planned week	Based on Plan Value
Plan Date	Planned date	Based on Plan Value

The SCHEDULE Worksheet

Overview

The SCHEDULE worksheet implements the TSPi Schedule Planning template.

This worksheet is used in conjunction with the TASK worksheet to produce the TSPi task and schedule plans.

Plan Hours

To set up the SCHEDULE worksheet, enter the plan hours for each week of the schedule.

The SCHEDULE worksheet will automatically enter the date and week number as plan hours are entered.

The total plan hours on the SCHEDULE worksheet must be greater than or equal to the total plan hours on the TASK worksheet.

A summary of task plan hours and schedule plan hours at the top of the SCHEDULE worksheet shows the difference.

Deleting SCHEDULE weeks

To delete weeks on the SCHEDULE worksheet you must delete the plan hours for the weeks, one week at a time.

Fields

The following table describes the fields on the SCHEDULE worksheet.

Field	Contents	Default Value or Calculated Value
Date	The Monday date for the project week	Calculated based on project start date
Week	The project week	Calculated for each week
Plan Hours	Total hours planned for the week	Defaults to value in prior row

Calculated fields

The following table describes the calculated fields on the SCHEDULE worksheet. **Do not enter data in these fields** .

Field	Contents	Default Value or Calculated Value
Cum Plan Hours	Cumulative plan hours	
Actual Hours	Actual hours for week from the LOGT	Sum(DeltaTime) for dates within the week
Cum Actual Hours	Cumulative actual hours	
PV	Plan value	For tasks planned for completion in week
Cum PV	Cumulative plan value	For the tasks actually completed in this week
EV	Earned value	
Cum EV	Cumulative earned value	
Predicted Hours		
Cum Predicted Hours		

Predicted EV	Predicted earned value	Based on average weekly EV
Cum Predicted EV	Cumulative predicted earned value	

The SUMP Worksheet

Overview

The SUMP worksheet implements the TSPi SUMP Program Plan Summary form.

SUMP displays summary size, time, and defect data for any assembly or for the SYSTEM.

SUMP also includes productivity, CPI (cost-performance index), %Reuse, and %New Reuse.

Fields

The following table describes the data that are entered on the SUMP worksheet.

Data	Contents
%Reuse	Plan and actual %Reuse *%Reuse = Reuse LOC/Total LOC*
%New Reuse	Plan and actual %New Reuse *%New Reuse = New Reuse LOC/New and Changed LOC*

Calculated fields

The following table describes the calculated data on the SUMP worksheet. **Do not enter data in calculated fields**.

Data	Contents
Program Size	Plan and actual size summary data

- requirements pages

- high-level design pages

- detailed design lines

- lines of code

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Time in Phase	Plan and actual time for each TSPi phase
Defects Injected	Plan and actual defects injected in each TSPi phase from Planning through System Test

Data	Contents
Defects Removed	Plan and actual defects removed in each TSPi phase from Planning through System Test
Productivity	Plan and Actual new and changed LOC per hour
CPI	Cost performance index *CPI = plan hours/actual hours*

Controls The SUMP worksheet has one control, the Assembly Selector Control, which selects the assembly to display on the SUMP worksheet. The list of possible selections includes all the assemblies on worksheet SUMS and the predefined assembly SYSTEM.
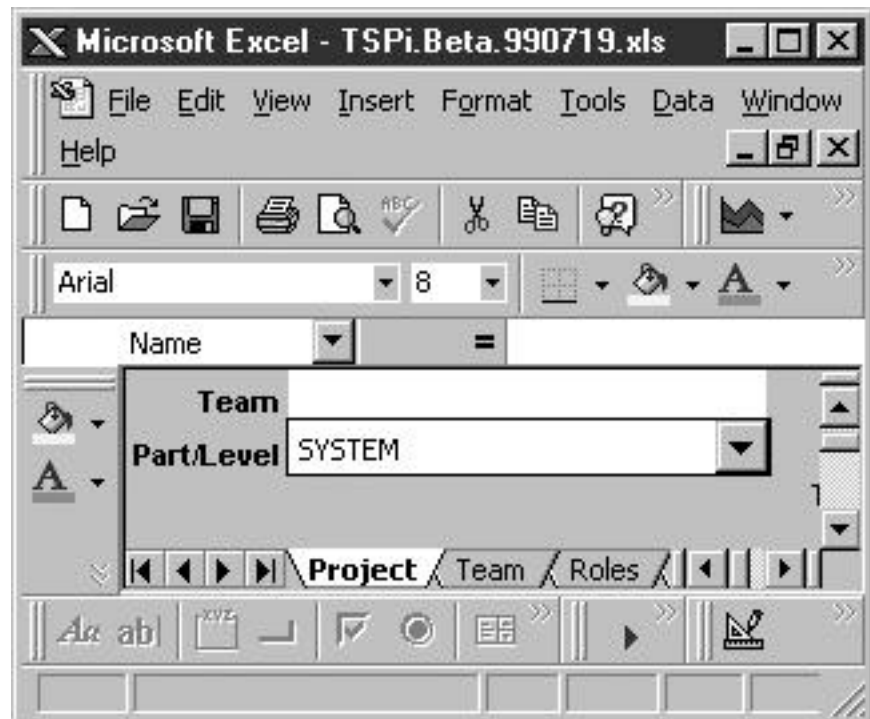
The SUMQ Worksheet

Overview

The SUMQ worksheet implements the TSPi SUMQ Quality Plan Summary form.

SUMQ displays summary quality data for any assembly or for the SYSTEM.

Planned defect injection rates and planned phase yields are entered on this form.

Fields

The following table describes the data that are entered on the SUMQ worksheet.

Data	Contents	Default Value or Calculated Value
Plan Defect Injection Rate	Enter the planned defect injection rates for each phase.	
Plan Phase Yield	Enter the planned phase yields for each phase.	

Calculated fields

The following table describes the calculated data on the SUMQ worksheet. **Do not enter data in these fields**.

Data	Contents
Percent Defect Free (plan and actual)	Percent of system assemblies free of defects by phase
Defects per Page (plan and actual)	Defects per page for requirements and high-level design documents
Defects per KLOC (plan and actual)	Defects per KLOC for the software by phase

Defect Ratios (plan and actual)   Defect ratios for design review vs. unit test and code review vs. compile

| Data	Contents
Development Time Ratios (plan and actual)	Development time ratios for phases:
	• Requirements inspection/Requirements
	• High-level design inspection/High-level design
	• Detailed design review/Detailed design
	• Detailed design/Code
	• Code review/ Code
Inspection and Review Rates (plan and actual)	LOC inspected or reviewed per hour
A/F Ratio (plan and actual)	Ratio of time spent in inspections and review phases vs. time spent in compile and testing phases
Phase Yield (actual only)	Yield by phase
Process Yield (plan and actual)	Cumulative yield for the process
Defect Injection Rates (actual only)	Defects injected per hour for each phase
Defect Removal Rates (plan and actual)	Defects removed per hour for each phase

Controls

The SUMQ worksheet has one control, the Assembly Selector Control, which selects the assembly to display on the SUMP worksheet. The list of possible selections includes all the assemblies on worksheet SUMS and the predefined assembly SYSTEM.
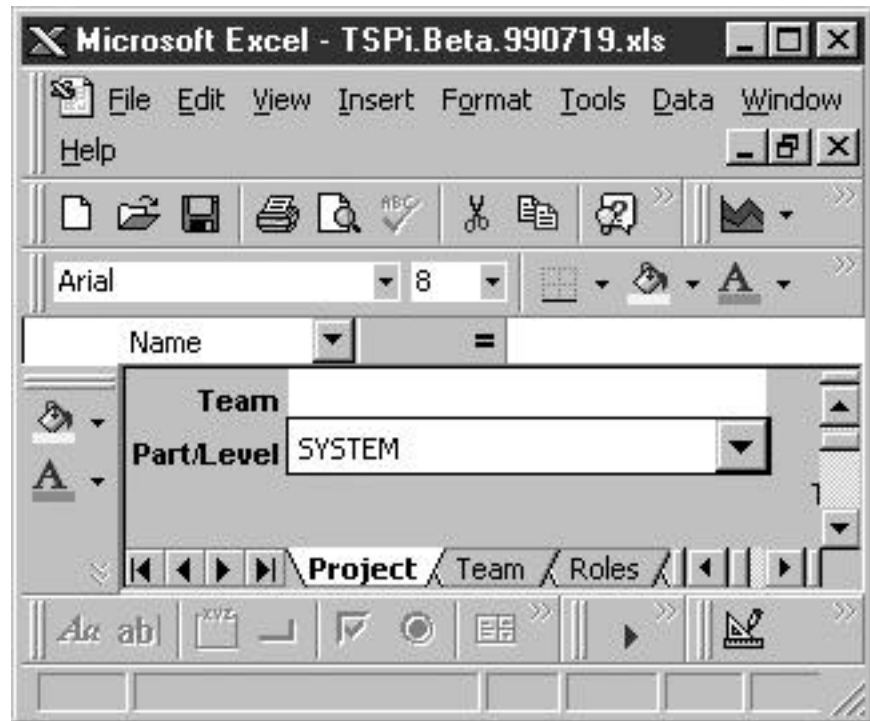
The SUMS Worksheet

Overview   The SUMS worksheet implements the TSPi SUMS Size Summary form.

SUMS contains the plan and actual size for each assembly and part. Size estimates and the measured size of each part are entered on SUMS.

Fields   The following table describes the data that are entered on the SUMS worksheet.

Data	Contents	Default Value or Calculated Value
Part ID	A unique ID number for each part and assembly	Calculated
Part Name	The name of the part or assembly	
Assembly or Part	A = assembly P = part	Defaults to A
Part of	The parent assembly of this part or assembly	
Owner	Initials of product owner	
Size Measure	The size measure unit for the part or assembly	Valid values are • Text pages • Req pages • HLD pages • DLD lines • LOC
Planned Size	Planned Base, Deleted, Modified, Added, and Reused Size are entered. Planned New and Changed and Total Size are calculated.	

| Actual Size | Actual Base, Deleted, Modified, Added, and Reused Size are entered.

Actual New and Changed and Total Size are calculated. |