SPRINTOMETER

Agile Project Management Tool

User's Guide

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System Requirements

Microsoft Windows XP, Windows 2003 and Windows Vista are supported.

Because application client has modern GUI in Microsoft Office 2007 style, supports themes and efficient forms refresh Windows 2000 and earlier versions of Windows are not supported.

For export from Sprintometer to Microsoft Excel you should have installed on client computer Microsoft Office XP, 2003, 2007 or later. Microsoft Office 2000 and earlier versions are not supported.

Tool Purpose

Sprintometer is a simple and user friendly application for Agile projects' management and tracking. It can be used for management of SCRUM and XP projects. To simplify data exchange with external programs all charts and spreadsheets in Sprintometer can be exported to Microsoft Excel. XML format for local files can be used also.

The following main features are supported by Sprintometer:

- SCRUM & XP projects tracking
- Unique 'Burn-down' chart with statistical prediction
- Unique 'Track upon work left/complete' chart with statistical prediction
- Tracking of sprint/iteration with variable team composition
- Separate tracking of development and testing tasks
- Change requests tracking
- Prediction of deviation from scheduled sprint/iteration plan
- Calculation of daily scope for developers & testers to be on track
- Export to Microsoft Excel for all charts and spreadsheets
- Data stored in local file or in a shared DB on public server www.sprintometer.com
- Secured HTTPS connection to public server
- Modern and user friendly GUI in Microsoft Office 2007 style
- Assignment of resources to Tasks and User Stories
- Password protected tracking of project budget
- Numerous reports with all important Agile parameters
- Extremely quick application response time
- Saving/Loading of project data in XML format
- Quick printing option
- Sample SCRUM and XP projects are included

Quick start of SCRUM (XP) project tracking

TIP: To understand functionality of application quickly it is highly recommended to look at local file with sample SCRUM or XP project provided in ZIP archive available on Sprintometer

site for free download. Open a sample file from application and review all tabs in the right pane for different nodes selected in the left pane tree.

1. Download the latest version of application from site www.sprintometer.com.
2. Extract content of ZIP archive into a local subdirectory.
3. Run file Sprintometer.exe (installation procedure is not required).
4. Select 'New' item from application ribbon bar.
5. In popup window select project type for example 'SCRUM' and 'Tracking Units' for example 'Perfect Hours', click OK.
6. For the newly created project node enter your project name on the 'General' tab in the right pane then click 'Apply' button or just press 'Enter' key to apply your changes.
7. Right click to the project node in the left pane and select 'Add Sprint' in popup menu.
8. For the newly created sprint node enter your sprint name on the 'General' tab in the right pane.
9. Select required 'Start Date' and 'End Date' of your sprint in 'Schedule' combo-boxes.
10. In the auto-populated 'Work Dates' list select dates which are not actually work days (like weekend or vacations) and move them to the right list called 'No Work Days' by clicking a button with arrow. You can use 'Ctrl' or 'Shift' + left mouse click for multi-selection in the lists.
11. Click 'Apply' button in the right pane to save sprint properties.
12. Right-click to sprint node in the left pane tree and select 'Add Story' in popup menu.
13. Enter Story properties in the right pane and click 'Apply' button.
14. Right-click to story node in the left pane tree and select 'Add Task' in popup menu.
15. Enter Task properties in the right pane including task estimation in perfect hours and click 'Apply' button.
16. Repeat steps 14-15 for all Tasks of the parent User Story.
17. Repeat steps 12-16 for all User Stories included into your Sprint together with their Tasks.
18. Select Sprint node in the left pane tree and select 'General' tab in the right pane.
19. In the field 'Last Reported Date' which defines which day of tracking is currently the last one select first development day of the sprint and click 'Apply'.
20. Select 'Stories' tab in the right pane. In cells with dotted background you can enter daily time reporting for tasks in format 'Spent time/Left time'.

Now all agile parameters and charts including 'Burn Down Chart' will be calculated automatically on the base of entered 'Spent time/Left time' information for passed days. Every evening you should just increase 'Last Reported Date' and enter time reporting in the appended date column of 'Stories' spreadsheet.

TIP: During filling of cells with time reporting for SCRUM project slash '/' and following value of 'Left time' is optional. If single value is entered in cell then it will be treated as 'Spent time' while 'Left time' will be automatically calculated from current task estimation and displayed inside the same cell automatically.

Common GUI features & tips

Tree structure

Application GUI has Microsoft Explorer style with tree in the left pane and tabs containing properties of a selected tree node in the right pane. Tree hierarchy has typical for Agile project structure: Project->Sprint (or Iteration for XP project)->User Story->Task.

A Task can either be a development or testing task. For better visibility tasks of different types are marked in tree by different icons. A Task can additionally be a Change Request which is marked in tree by dimmed icon of correspondent type.
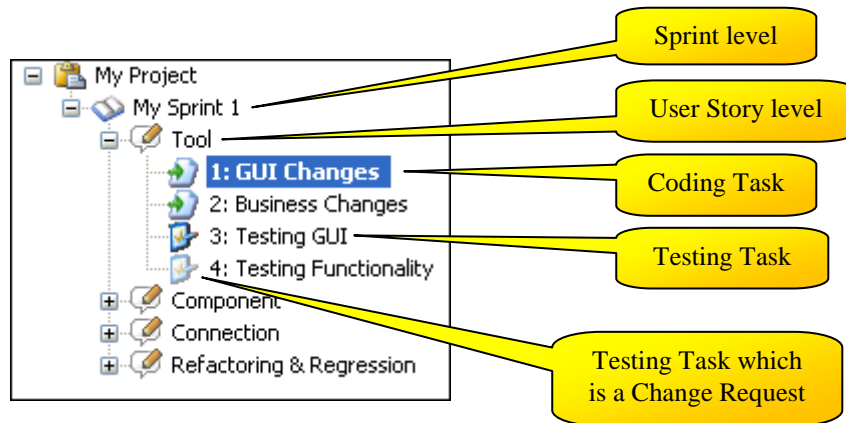
Coding, Testing & Change Requests in spreadsheet

User can review and change time reporting information in editable cells of spreadsheets located in the right pane on the level of Sprint/Iteration (tab 'Stories'), User Story (tab 'Tasks') and Task (tab 'General').

Editable cells are always marked in application by dotted background while read-only cells are indicated by solid background

Coding tasks are indicated by black text while testing tasks have blue color. Additionally change requests are highlighted by italic font.

'Work completeness' color legend

Color highlighting is widely used in application to indicate percentage of work done in relation to work current estimation for SCRUM project and in relation to work original estimation for XP project.

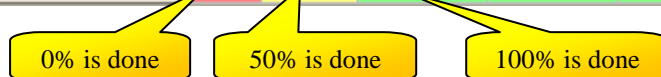Fort color legend similarity with traffic lights is used:

0% of work is done - red color

50% of work is done – yellow color
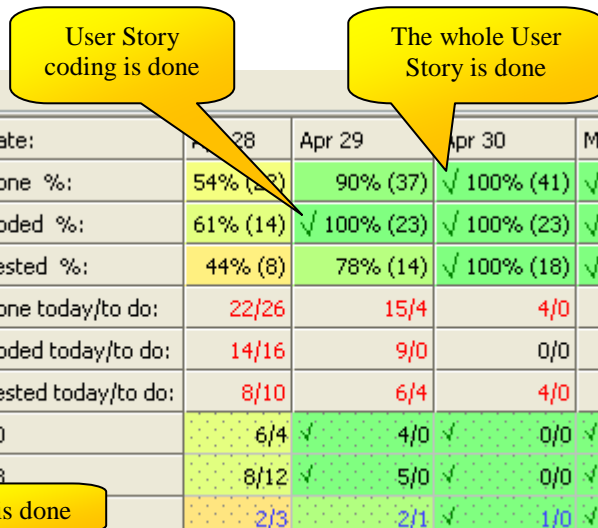
100% of work is done – green color

All intermediate percent values are presented by interpolated colors.

Check mark for finished items

If Task, User Story or Sprint/Iteration is completely finished it is indicated by check mark in the left area of correspondent cell:

Smart navigation

User can quickly navigate down in hierarchy Project->Sprint/Iteration->User Story->Task by clicking to correspondent item in cell of spreadsheet or report if it is displayed underlined:

Click here to go to Story 1 details

√ **Story 1**	**Tool**	Done %:	39% (…	83% (30)	√ 100…	√ 100%…	√ 100%…
√ 1	GUI Changes	10	6/4	√ 4/0	√ 0/0	√ 0/0	√ 0/0
√ 2	Business Changes	13	8/12	√ 5/0	√ 0/0	√ 0/0	√ 0/0
√ 3	Testing GUI	6	0/6	3/3	√ 3/0	√ 0/0	√ 0/0
√ 4	Testing Functionality	7		4/3	√ 3/0	√ 0/0	√ 0/0

Click here to go to Task 4 details

Navigation up to a parent User Story, Sprint/Iteration or Project can be done by clicking to 'Go to Upper Node' button in application ribbon bar.

Base Task spreadsheet

In Sprintometer application Task is the smallest 'atomic' object of the whole Agile project tracking. Therefore 'General' tab on Task level presents very important basic information for project tracking. Parent spreadsheets 'Tasks' on the level of User Story and 'Stories' on the level of Sprint/Iteration actually contain similar information but with added totals for coding, testing and the whole development.

Daily time reporting about work spent/left (SCRUM) or done (XP)

At the end of every sprint/iteration work day manager or users should enter into Sprintometer time information for tasks they were working on. This can be done is editable spreadsheets on Sprint/Iteration, User Story of Task level. Usually time reporting takes place in the rightmost vertical column of spreadsheet which contains editable cells for the current (last one so far) day of sprint/iteration.

Both in SCRUM and XP projects tasks can be closed partially which means user can report that for example he/she spent 5 perfect hours working on task originally estimated in 10 perfect hours.

In case of SCRUM project 2 values separated by slash ('/') should be entered in task cell for correspondent date. In accordance with SCRUM first value indicates how much time user was working on specific task today while second value indicates how much time he/she believes is left to do. For quicker input slash and second value can be skipped. In this case 'time left' will be automatically calculated taking into account time spent during the day and current task estimation and displayed in the same cell.

In case of XP (Extreme Programming) project single value should be entered in task cell for correspondent date. In accordance with XP this value indicates how much time of original estimation is done.

Export to Microsoft Excel

For all spreadsheets, reports and charts displayed in the right pane of application export to Microsoft Excel is supported. If you see ribbon bar button 'Export to Excel' enabled just click on it to get correspondent data in Excel spreadsheet. This feature can be useful for further data procession, customized reporting or flexible printing.

Microsoft Excel should be installed on user machine to use this functionality. All modern versions of Microsoft Excel are supported including Microsoft Excel 2007.

XML format of local files

Sometimes experienced users would like to implement custom handling of Agile project data for example in their own programs which could read Sprintometer local file. To enable this approach Sprintometer supports format of local file as uncompressed or compressed XML. Just click to the icon in the left upper corner of application, select menu option 'Save As' and choose required type of XML file to be saved. Compressed XML type is used to reduce size of XML file which can be rather big for long Agile projects.

'Two level' saving of data in right pane

To get maximum performance while working with application 'two level' saving of data is implemented in Sprintometer.

When you change data in right pane enabling of 'Apply' button located in the pane indicates that there are some unsaved modifications. However click on 'Apply' button changes only project data cached in memory but not project data in permanent storage which can be either local file or database if server mode of application is used. To commit all changes made during tabs edition to permanent storage user should click 'Save' button in ribbon bar.

Application will also prompt user to save modified data if any on document/application closing. Because of caching 'Apply' is a very quick operation while 'Save' can take longer time especially if server mode is used and your Internet connection is slow.

For faster user input click on 'Apply' button can be replaced by pressing of 'Enter' hot key while right pane has input focus.

Undo

If you have some changes in the left pane you can click 'Undo' button to revert all editions to the state which was after the last successful 'Apply' click.

For faster user input click on 'Undo' button can be replaced by pressing of 'Escape' hot key while right pane has input focus.

On-line validation

To display validation errors instantly 'Validate while typing' feature is supported for all edition in right panes of application. When input is wrong label on 'Apply' button instantly changes to 'Validation!' and red text in application status bar provides detailed information about validation error. After click on 'Validation!' button user will see the same validation error description in popup message box.

Spreadsheets

User can fill information about 'spent time'/'left time' (for SCRUM projects) of 'done time' (for XP projects) in convenient spreadsheets available for inline edition on Sprint/Iteration, User Story and Task levels.

On Sprint/Iteration level and on User Story level spreadsheets additionally contain correspondent time reporting totals for coding, testing and the whole development.

Detailed legend for tab 'Stories' on Sprint/Iteration level in case of SCRUM project is presented below:

How to:

How to create schedule for the new sprint/iteration

To calculate numerous Agile parameters and build charts program should know schedule of sprint/iteration work days and current (the last one so far) day. This information can be entered in tab 'General' on Sprint/Iteration level:

1. Select 'Start Date' and 'End Date' in 'Schedule' control group. After this action list 'Work Dates' will be auto-populated by all intermediate dates from start date till end date.

2. Some dates in the list 'Work Dates' (like weekends) will not be actually the work days so select all of them by left-mouse click and move to the list 'No Work Dates' by click on button with arrow. For multi-selection in date lists you can press additionally 'Ctrl' or 'Shift' key.

3. There are some specific dates in sprint/iteration which are work days from the point of view of budget but development will not be done during these days and therefore they should be excluded from tracking. Good sample of such days are days of Sprint Planning Session (Planning Game). You can define such dates in the list 'Not Tracked Budget Dates' to have your sprint/iteration budget calculated correctly.

4. Click 'Apply' button.

Unlike some others project tracking tools Sprintometer does not use current date from computer clocks. Automatic usage of date from computer clocks reduces flexibility in time reporting and can cause problems if Sprintometer is used in Server mode from different time zones.

Therefore in Sprintometer before daily time reporting user should manually adjust last reported date which actually defines date of the last vertical column in spreadsheets on Sprint/Iteration, User Story and Task level available for input. For this purpose there is a correspondent field called 'Last Reported Date' in tab 'General' on Sprint/Iteration level.

Typically at the end of each sprint/iteration work day user just scrolls date to the next work date of predefined sprint/iteration schedule. To simplify this task a button 'Select Next Reported Date' can be used. Click to this button increases date in 'Last Reported Date' field skipping 'no work dates'.

During appending of a new date column in spreadsheets time reporting values from the previous work date are used by default.

Accidentally user can forget to scroll date to the next work day of sprint/iteration and therefore he/she can erroneously start time reporting in column of previous date. To detect such situation easily current date in spreadsheets is always highlighted by pink background:

Current date from computer clocks is automatically highlighted

Task#	Task Name	Date:	Apr 28	Apr 29	Apr 30	May 04	May 05
		Done %:	54% (22)	90% (37)	√ 100% (41)	√ 100% (41)	√ 100% (41)
		Coded %:	61% (14)	√ 100% (23)	√ 100% (23)	√ 100% (23)	√ 100% (23)
		Tested %:	44% (8)	78% (14)	√ 100% (18)	√ 100% (18)	√ 100% (18)
		Done today/to do:	22/26	15/4	4/0	0/0	0/0
		Coded today/to do:	14/16	9/0	0/0	0/0	0/0
		Tested today/to do:	8/10	6/4	4/0	0/0	0/0
√ 1	GUI Changes	10	6/4 √	4/0 √	0/0 √	0/0 √	0/0
√ 2	Business Changes	13	8/12 √	5/0 √	0/0 √	0/0 √	0/0
√ 3	Testing GUI	5	2/3	2/1 √	1/0 √	0/0 √	0/0
√ 4	Testing Functionality	13	6/7	4/3 √	3/0 √	0/0 √	0/0

How to create a new Sprint/Iteration, User Story or Task

All data of Agile project are presented in hierarchy Project->Sprint/Iteration->User Story->Task displayed as a tree in the left pane of application. After selection of a node in the left pane tree user can view and edit its properties in tabs in the right pane.

To add or delete node user can select correspondent command in context menu appeared after right mouse click to a tree node:
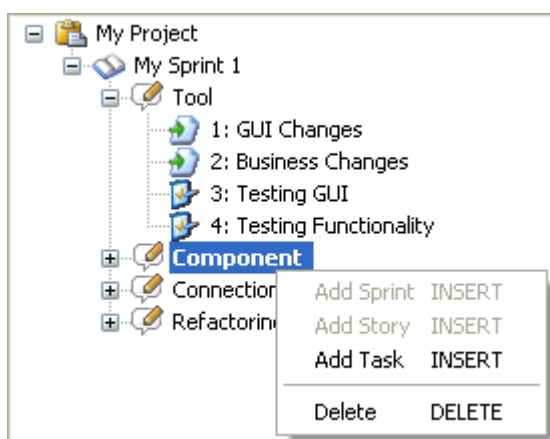
Alternatively while input focus is set to tree pane hot keys 'Insert' and 'Delete' can be used for child node insertion or current node deletion accordingly.

User can easily sort Sprints/Iterations, User Stories and Tasks in tree by Drag & Drop and clone them by using 'Ctrl' + Drag & Drop.

TIP: If you have many independent Change Request tasks in XP project you can create a dummy User Story called 'Change Requests' and put all of them in it.

How to define Sprint/Iteration resources and budget

Resources and budget can be defined in 'Resources & Budget' tab on Sprint/Iteration level. Additionally information about the whole project 'Resources & Budget' is available as report in tab 'Resources & Budget' on Project level.

Access to these tabs can be password protected by using ribbon bar commands 'Set Password' and 'Remove Password'.

To add a new resource like for example 'Developer Smith' click to 'Add Resource' button on tab 'Resources & Budget' and provide Resource Name, Type and Hourly Rate in popup dialog. To delete a resource select correspondent line in 'Resources & Budget' tab and press 'Delete' key.

After addition of all required resources user should enter correspondent values of 'man days' for each editable cell of 'Resources & Budget' tab.

Application supports variable team size during sprint/iteration – just provide variable 'man days' in accordance with team members' vacations for example.

After filling of all resources' editable cells you can see automatically calculated daily budget and sprint/iteration accumulated budget in the upper area of 'Resources & Budget' tab.

IMPORTANT: Sprintometer supports calculation of such important XP parameter like 'Load Factor' which is a proportion between calendar time required for implementation of some task and its estimation in perfect hours. However to calculate 'Load Factor' correctly program should know who is a developer, who is a tester and who does not close perfect hours at all (like Project Manager). Therefore if you want to track 'Load Factor' you should fill resources and assign to them 'Resource Types' correctly.

Load Factor is also used in charts for correct extrapolation in case of variable team size.

If you do not need budget, resources and 'Load Factor' information you can leave tab 'Resources & Budget' unfilled.

Dates which are marked in tab 'General' on Sprint/Iteration level as 'Not Tracked Budget Dates' are displayed in tab 'Resources & Budget' with slightly darker background.

How to assign resources to Tasks and User Stories

If it is necessary resources can be assigned to tasks. This can be done in 'General' tab on Task level in combo-boxes 'Assigned To'.

Because pair programming is often used in Agile projects up to 2 persons can be assigned and in case of 2 persons application assumes equal distribution of work between them.

Content of combo-boxes for resources assignment is defined by list of resources in 'Resources & Budget' tab on Sprint/Iteration level.

Sometimes it is convenient to assign resources to the whole User Story. This can be done in 'General' tab on User Story level in combo-boxes 'Assign ALL coding' and 'Assign ALL testing' for coding and testing work accordingly. Similar to task assignment up to 2 persons can be assigned to each work type. Actually assignment of person on the level of User Story is completely the same as assignment of this person in 'General' tab on Task level for all User Story child Tasks of correspondent type. Thus GUI for assignment on User Story level is just for convenience and quick assignment of resources to child tasks.

If all User Story child tasks of the same task type have the same person assigned then this person will be auto-selected in assignment combo-box on User Story level. Otherwise combo-box 'Assign ALL coding' or 'Assign ALL testing' will contain text '- DIFFERENT -'.

After assignment of persons to Tasks and User Stories user can track personnel workload in 'Workload Report' tab on Sprint/Iteration level where not-assigned time will be presented by a separate line. However you should be careful with measuring of personnel productivity because such reporting can cause tension inside team and damage team spirit very important for Agile projects.

How team can work with shared data located in public Sprintometer Server

Sprintometer can work in two modes: with local files like for example Microsoft Excel (local file mode) or with data stored in shared database located on public Sprintometer Server (server mode). In second case connection to Server via Web Services is used and it works from any location with Internet access. For strict data security HTTPS connection to Sprintometer Server is used.

For work in both modes and for registration on Sprintometer Server the same Sprintometer.exe binary file can be used.

At any moment user can change work mode from local file mode to server mode and vice versa.

In server mode local files can also be used as backup of project information normally stored in Sprintometer Server DB.

Registration on Sprintometer Server

To use server mode registration on Sprintometer public server should be done at first.

1. Run Sprintometer.exe from location where Internet connection is available.
2. Click 'Settings' icon in 'Remote Server' group of ribbon bar.
3. In popup dialog 'Server Configuration' select tab 'Connection' and make sure the default link to public Sprintometer Server is provided:
   https://ws.sprintometer.com/SWS/SWS.asmx
4. In the same tab make sure you have correct Proxy Server settings similar to Proxy settings in your Internet Browser.
5. Switch to 'Security' tab of popup dialog and click button 'Register New User'.

6. In the new popup dialog type 'Login', 'Name' of the new user and a valid e-mail where password will be automatically sent and click to button 'Register'.

7. Copy the 'Login' and 'Password' you will get in the e-mail into correspondent fields of 'Security' tab of 'Server Configuration' dialog and set flag 'Remember Login and Password on this PC' to reuse it in future..

8. Click OK button of 'Server Configuration' dialog.

Important that user login name should be unique for Sprintometer Server.

User can change password later if necessary by using the same 'Server Configuration' dialog.

Assignment of users to a project on server

Creator of a project on Sprintometer Server has all permissions to the newly created project including permission to assign new users to it. In turn all users assigned to project will have all permissions too.

To assign a new user current user of project should know his/her unique login name used during registration to Sprintometer Server.

TIP: Usually project manager creates new project on server, registers all unregistered future project users on Sprintometer Server, assigns them to the newly created project and sends by e-mail login information to all project participants. Project users can change their passwords later if necessary.

Assignment of registered users to project on Server can be done by the following steps:

1. Run Sprintometer.exe from location where Internet connection is available.

2. Make sure you have correct Internet connection settings and 'Login'/'Password' in 'Server Configuration' dialog.

3. Open an existing project from server by clicking to icon 'Open' in 'Remote Server' ribbon bar group or create a new project on server by clicking to icon 'Save As' in 'Remote Server' ribbon bar group after creation of project locally.

4. Select the topmost 'Project' node in the left pane tree of application.

5. Select tab called 'Server Project Users' in the right pane of application.

6. Click button 'Add User'. Type in the Popup dialog login name of some already registered on the server user you would like to assign the project. This user should preliminary register on the Public Sprintometer server and inform you about his/her unique login name.

7. **IMPORTANT**: Click 'Save' icon in 'General' ribbon bar group to submit new project assignments to Server.

TIP: Once you were registered on server and assigned to a project you should not type login/password every time you open a project from Sprintometer Server. Just click to icon in the left upper corner of application and select project from 'Recently Opened Document'.

Charts

There are two very useful charts in Sprintometer application. Both charts can be exported to Microsoft Excel for further custom procession or flexible printing.

Burn-down chart

Classical Burn-down chart is located in tab 'Scope Chart' on Sprint/Iteration level.

User can switch between Burn-down for coding, for testing or for the whole development by clicking to radio-buttons below the chart.

Horizontal dash line indicates sprint/iteration original estimation. Yellow bars highlight scope of Change Requests appeared during sprint/iteration. Change Requests are typical for XP project but Sprintometer allows them for SCRUM project also. Note that usually Change Requests during sprint are prohibited for SCRUM project.

Red solid line indicates extrapolation of Burn-down chart taking into account average scope closed daily during passed days and scope of left tasks. Note that Sprintometer supports variable team composition defined in 'Resources & Budget' tab on Sprint/Iteration level and therefore extrapolation can differ from straight line.

Additionally taking into account statistical dispersion of team velocity for passed days Sprintometer calculates and displays as white sector possible deviation of extrapolation assuming 95% confidence.
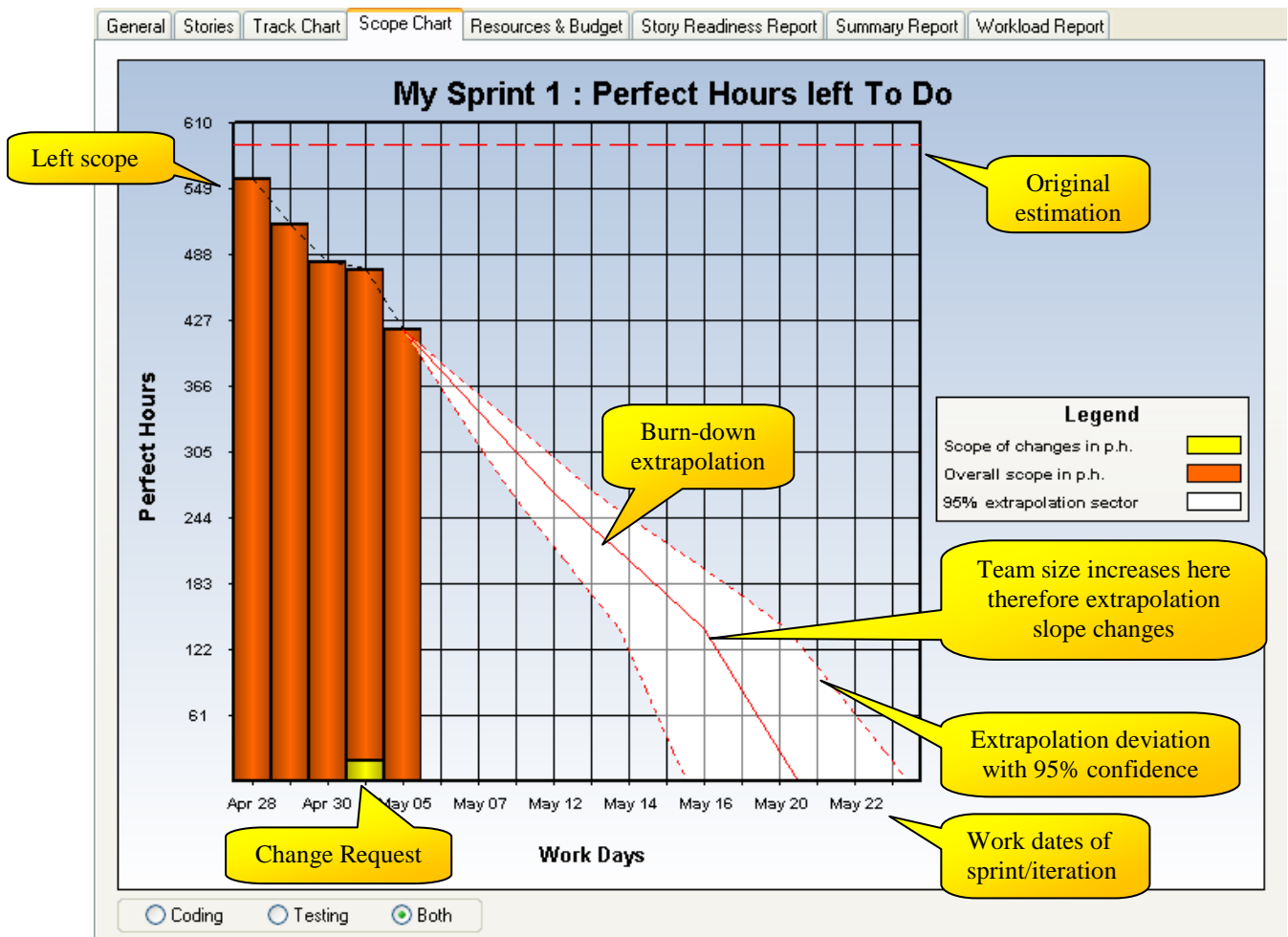
Sprint/Iteration track upon work left/complete

This chart in tab 'Track Chart' on Sprint/Iteration level displays 3 curves:

1. Team Velocity (perfect hours or other estimation units done during a day) for each day of sprint/iteration (green line).

2. Deviation from ideal project progress skipping Change Requests appeared during development (magenta line).

3. Deviation from ideal project progress taking into account Change Requests appeared during development (blue line).

Depending on selection of radio-button below the chart these three curves can be calculated for coding, testing or the whole development.

For 'Track upon work left' and 'Track upon work complete' extrapolation is automatically calculated and displayed by dotted lines. The extrapolation is based on average daily done time and left scope.
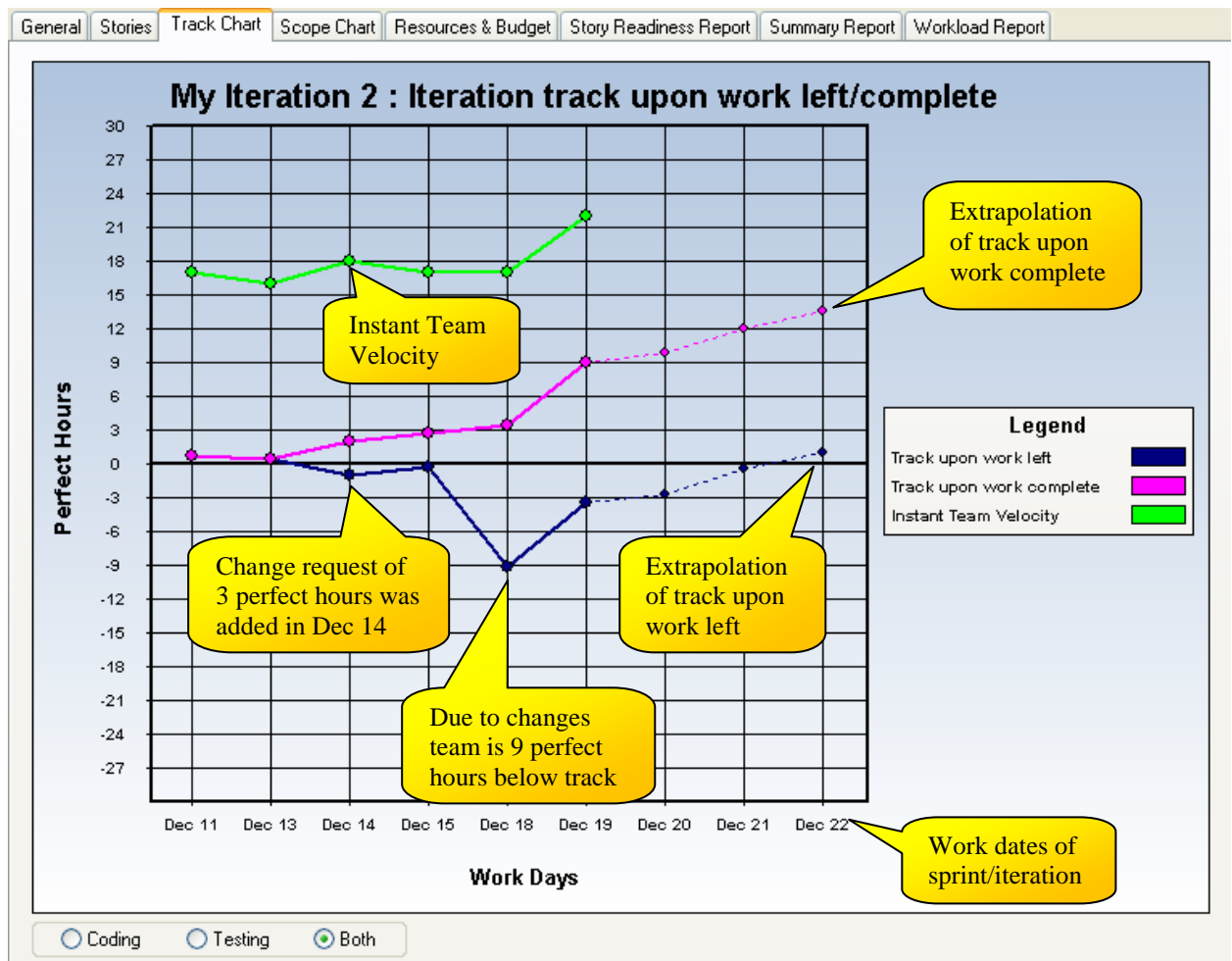
Reports

There are several useful reports in application which provide information about all important Agile parameters. All reports can be exported to Microsoft Excel for further custom procession or flexible printing.

Story Readiness report

This report is especially useful to customers. Customer can see which User Stories are ready for review (coding tasks are finished but testing tasks and not finished yet) and which User Stories are ready for testing (both coding and testing tasks are finished).

If User Story is ready for review customer can check already its functionality to provide feedback faster but detected bugs should not be reported to developers because testing of the User Story is still unfinished.

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If User Story is ready for testing this means customer can both review and test it. In case of bugs they should be reported to the development team because team testers have missed them or they are specific for customer environment.

Summary report

Summary report is especially useful for development team because it contains all important parameters of Agile project together with statistically predicted deviation from sprint/iteration end date.

Usually during morning standup meeting Agile project manager informs team about the following important parameter from this report:

- Work days left for current sprint/iteration

- How many perfect hours (or other estimation units) developers and testers made during a previous day

- How many perfect hours developers and testers should do today to keep project on track

	Implementation	Coding	Testing
Work days left:	3		
Sum done perfect hours for the last day:	107	69	38
Done perfect hours during the last day:	22	12	10
Overall done %:	67%	69%	64%
Average perfect hours to do daily to be on track:	17.50	10.33	7.17
Average Load Factor (if resource types defined):	2.69	2.78	2.53
Average Team Velocity:	17.83	11.50	6.33
Predicted deviation from deadline (days):	-0.06	-0.30	0.39

If project is an XP project and coding/testing resources are defined in 'Resources & Budget' tab then Sprintometer calculates 'Load Factor' for developers, testers and the whole team. By definition 'Load Factor' is a proportion between real time required for implementation of some work and estimation of this work in perfect hours assuming ideal work conditions. 'Load Factor' usually varies from 2 till 4 depending on team speed and professionalism.

'Team Velocity' is another important Agile parameter displayed in this report and by definition means number of perfect hours (or other estimation units) made by team daily.

Glossary

Term/Acronym	Meaning
XP	Extreme Programming, Agile methodology
SCRUM	Agile methodology similar to XP but focused on high level processes. Can be efficiently combined with XP.
Perfect hours	Estimation of coding or testing task assuming hypothetical ideal conditions for work
Load Factor	Ratio of time required for task implementation in real life conditions to time required for task implementation in hypothetical ideal conditions. Typically it varies from 2 till 4 for different persons or teams.
Team Velocity	Number of perfect hours (or others estimation units) specific team can do during a work day
Planning Game	Brain storming with participation of all team members and customers to clarify business requirements for sprint/iteration defined as User Stories, to split them into technical tasks and to estimate them. Normally takes from 1 to 3 days.
Sprint Planning Session	In SCRUM it is very similar to XP Planning Game
Sprint	Period of SCRUM projects to be planned and estimated during Sprint Planning Session. Sprint normally lasts 3 weeks.
Iteration	It is XP equivalent of Sprint from SCRUM methodology. Period of XP projects to be planned and estimated during XP Planning Game. Normally varies from 2 till 4 weeks.
User Story	Customer description of some relatively independent business requirement presented as 'black box' functionality described from the point of view of application user.
Task	In SCRUM or XP project customer defines requirements as set of User Stories. In turn development team splits every User Story into low-level coding or testing technical tasks required for its implementation.
Change Request	Additional Task or User Story which was not presented at Planning Game but appeared during implementation. Change requests are normal for XP iteration but SCRUM usually does not allow Change Requests during a sprint.