Atomic Project Management

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Atomic Object LLC
Extreme Programming Cycle

Two aspects
– you’re never done
– it takes two to plan

Time cycles/phases/scale
– Releases
– Iterations
– Standups
– Pairing
Releases

Driven by the business

Time scale
  – months

Unit of work
  – release features

Means of organization
  – release plan
Release Planning

Trade shows

Competition

Sales goals

Strategic plan

Business environment

Economy
Iterations

Highest priority stories
Goal: tested, working system
  – whole, but not feature complete
  – risk reduction
Unit of work
  – stories
  – short enough to estimate
Time scale
  – weeks
Start of iteration

Story prioritization
– by the customer

Estimation
– by the developers
– averaged across everybody
– done in story points
End of iteration

Acceptance tests
– by the customer

Demo time!
– for customers
– for developers

New stories
Standups

Sharing
  – progress
  – plan for the day
  – roadblocks

Time scale
  – days

Borg brain synch
A day in the office
Pairing

In the trenches

Time scale
- hours

Unit of work
- the task

Means of organization
- the task board, cards, facilities
Information Radiators

The usefulness of metrics
– shared knowledge
– emotional detachment

XP approach
– sense a problem
– devise a metric
– display the results

Watch for means/end inversion
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<tr>
<th>Employee Name</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
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<td>John</td>
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**Utilization (54%)**

**Estimated revenue**

July 2007

Atomic Object
### DCI Monitor

**Mon Jul 02 12:52:17 EDT 2007**

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<thead>
<tr>
<th>AGI Production Simulator</th>
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<td>x12parser</td>
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Project Tracking and Reporting

Simple, small, on/off
- weak iteration ritual (phases only)
- cork board, cards, PunchIt, on-demand status reports
- BaseCamp for coordination

Complex, large, long-running
- BaseCamp for coordination
- ExplainPMT, strac, spreadsheets for stories, velocity
### Bepco Ext Diag - Story Summary Report
#### 2004 April 27

<table>
<thead>
<tr>
<th>Lo Est</th>
<th>Hi Est</th>
<th>Worked</th>
<th>Story</th>
<th>Remain Est</th>
<th>% Done</th>
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Total Estimate: 165

Total Worked: 148

Remaining in Estimate: 17

Projected Remaining: 0

Projected Completion: 100%
Large Projects

At least 2 developers, at least 2 months
One week iterations
Often have an approved total budget
  – developer land (points, hours)
  – money land ($)
Tracking Stories

Tools can help track stories, the backlog, iterations, and velocity

- stories: unit of work, sized by points
- backlog: identified, but incomplete, stories
- iterations: set of stories done in a week
- velocity: points/iteration
9/30/2005 - 10/6/2005

Summary | Report

| Budget: 80 points | Completed: 11 points |
| Planned: 71 points | Worked: 6 points |
| Available: 9 points | Remaining: 60 points |
| Time Remaining: 2 days |

Story Cards

Assign Story Cards

<table>
<thead>
<tr>
<th>Scid</th>
<th>Title</th>
<th>Points</th>
<th>Worked</th>
<th>Category</th>
<th>Status</th>
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<th>Prioritize</th>
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<td>SC129</td>
<td>Update Drive Curve Editor</td>
<td>8</td>
<td>5</td>
<td>Story</td>
<td>Complete</td>
<td>None (take)</td>
<td></td>
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<tr>
<td>SC123</td>
<td>System Normal Stop Disconnect and Reconnect Controller Update</td>
<td>16</td>
<td>0</td>
<td>Story</td>
<td>Defined</td>
<td>None (take)</td>
<td></td>
</tr>
<tr>
<td>SC118</td>
<td>Disconnect and Reconnect Controller Update</td>
<td>4</td>
<td>0</td>
<td>Story</td>
<td>Defined</td>
<td>None (take)</td>
<td></td>
</tr>
<tr>
<td>SC124</td>
<td>Drive Curve Import</td>
<td>8</td>
<td>0</td>
<td>Story</td>
<td>Defined</td>
<td>None (take)</td>
<td></td>
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<tr>
<td>SC136</td>
<td>Message Box Update</td>
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<td>Story</td>
<td>Complete</td>
<td>None (take)</td>
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<td>SC137</td>
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<td>4</td>
<td>0</td>
<td>Story</td>
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</table>
Burndown Chart

A single, easily maintained indicator of project status

Reveal the following
– scope change
– expected completion time
Burn Down Chart

-10  0  10  20  30  40  50  60  70
0  5  10  15  20  25

points

0  5  10  15  20  25

iterations

-10  0  5  10  15  20  25

Total Work
Completed
Remaining Work
Linear (Completed)
Linear (Remaining Work)
Burn Down Chart
Generated on: December 22, 2005

Project Burndown

Story
A small, well-defined task. Projects are generally composed of many stories.

Point
A unit of measure used by a developer to estimate the effort necessary to complete a story.

Project Work
The sum, in points, of all stories in the project.

Completed Story Points
The sum of the points of all stories completed during the iteration.

Remaining Work
The total project work minus sum of points for all completed stories.

Project Velocity
The exponential weighted average of completed story points per iteration. A measure of the rate at which work on the project is being completed.

Project Completion Date
The estimated completion iteration for the project. Calculated by dividing the remaining work by the project velocity.

Completion Date Uncertainty
The expected range within which the project will be completed. The variance diminishes linearly as the project moves toward completion.