Today's Menu

Last Seminar:
Generative Methods
(John led)

This Seminar:
Measurement
(Ken is leading)

Next Seminar:
Reuse Economics
(Chris leads)

GQM (goal, question, metric)

→ Vic Basili
% University of Maryland, College Park

→ David Weiss, Ph.D. 1974
% Iowa State University
% Author of FAST
> What about FODA, FORM, DARE?
% Previously: Avaya Research

Establishing Goals

Facets:
1. Object: product or process under study
2. Purpose: Motivation behind the goal (why)
3. Focus: The quality attribute of the object under study (what)
4. Viewpoint: Perspective of the goal (who's viewpoint)
5. Environment: Context or scope of the measurement program

Goal Refinement
Concept: Understand the impact on quality of implementing formal inspections
Analyze the end product to better understand the impact on quality of implementing formal inspections on the speech enhancement project from the viewpoint of the project team.
Goal Definition Template

<table>
<thead>
<tr>
<th>Analyze</th>
<th>Effectiveness of structured reviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>(The object under measure)</td>
<td>Understanding</td>
</tr>
<tr>
<td>For the purpose of</td>
<td>- The detection of faults</td>
</tr>
<tr>
<td>(Understanding, controlling, or improving the object)</td>
<td>- The learning ability of the technique</td>
</tr>
<tr>
<td>With respect to</td>
<td>The project team</td>
</tr>
<tr>
<td>(The quality focus of the object that the measurement focuses on)</td>
<td></td>
</tr>
<tr>
<td>From the viewpoint of</td>
<td></td>
</tr>
<tr>
<td>(The people that measure the object)</td>
<td></td>
</tr>
<tr>
<td>In the context of</td>
<td>Project B</td>
</tr>
<tr>
<td>(The environment in which the measurement takes place)</td>
<td></td>
</tr>
</tbody>
</table>

GQM Definition

Refined Goal:

Goal 1: Decrease CR processing cycle time by 10%

Goal 2: Identify elements that account for 60% of cycle time variability

Other Paradigms And Frameworks

- Quality Function Deployment (QFD)
  - Software Quality Metrics (SQM)
  - Goal-Question-Metric (GQM)
  - Application of Metrics in Industry (AMI)
  - Goals Questions Indicators Measures (GQIM)
  - Balanced Scorecard (BSC)
  - Practical Software Measurement (PSM)
- Capability Maturity Model Integrated (CMMI)
  - Balanced Scorecard (BSC)
  - Capability Maturity Model for Software (CMM-SW)
  - Lean Enterprise Management (LEM)
  - Quality Improvement Paradigm (QIP)
  - Total Quality Management (TQM)

Mississippi State University

Department of Computer Science and Engineering

© 2010, Nan Niu

Source: www.goldpractices.com/practices/gqm