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| Description: Description: C:\Users\ASHISAI\Desktop\HIT Team\Logo HIT\Logo_New_New.png**Team Assignment 12** |
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| **HIT** |
| **5/12/2012** |
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**Software Measurement and Analysis**

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***Using either the Planning Poker or Wideband Delphi or Parametric or the combination of Wideband Delphi and Parametric to generates schedule, budget and resource estimates for the Viking project and presents your estimates to management. Explain in details how your team did to generate the estimates.***

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# Assumption:

* 1. Project assumptions: these are the project team's assumptions make before give estimate for Viking
* Project conducted with the participation of seven roles, including 12 members
* 1 Project Manager
* 1 Architect Manager
* 1 Change Manager
* 2 Requirement Engineer
* 1 Risk Manager
* 4 Developers
* 2 Testers
* Effort of members in Wideband Delphi was estimated in person hours, we will turn into person month to ease when estimate schedule
  + Assume that 1 person day = 8 person hours and 1 person month = 17.5 person days. (Excluding non-productive hours e.g. sickness, holidays, maternity leave, lunch breaks etc.)
  + Therefore, 1 person month = 140 person hours.
* When calculate Deviation Calculation in Wideband Delphi, assume that divisor equal 2.6 with estimation accuracy rate is 80%. Because lack of historical data and team’s ability.
  1. Task Assumption: the assumptions of participants made on each task when estimate the effort of Viking, refer to **Viking\_Delphi\_Estimation.xls**

**Reason to make task assumption:**

Team members make assumptions about the work to be done in order to deal with incomplete information

* Any time an estimate must be based on a decision that has not yet been made, team members can assume the answer for the sake of the estimate
* Assumptions must be written down so that if they prove to be incorrect and cause the estimate to be inaccurate, everyone understands what happened
* Assumptions bring the team together very early on in the project so they can make progress on important decisions that will affect development

# Work Breakdown Structure

A work breakdown structure (WBS), in project management and systems engineering, is a deliverable oriented decomposition of a project into smaller components. It defines and groups a project's discrete work elements in a way that helps organize and define the total work scope of the project. Refer to **Work Breakdown Structure.jpeg**

# Wideband Delphi

Wideband Delphi is a process that a team can use to generate an estimate

* The project manager chooses an estimation team, and gains consensus among that team on the results
* Wideband Delphi is a repeatable estimation process because it consists of a straightforward set of steps that can be performed the same way each time

**Team Steps:**

**Step 1: Choose the team:** all members of team 22 will join to estimate team

**Step 2: Kickoff Meeting:**

* Make sure that each team member understands the Delphi process
* The team brainstorms and writes down project assumptions.
* The team generates a WBS.
* The team agrees on a unit of estimation is person hours

**Step 3: Individual Preparation**

* Each team member independently generates a set of preparation results.
* For each task, the team member writes down an estimate for the effort required to complete the task, and any additional assumptions (task assumption) he needed to make in order to generate the estimate.

**Step 4: Estimation Session**

* During the estimation session, the team comes to a consensus on the effort required for each task in the WBS.
* Each team member fills out an estimation form which contains his estimates.
* The rest of the estimation session is divided into rounds during which each estimation team member revises her estimates based on a group discussion. Individual numbers are not discussed.
* The moderator collects the estimation forms and plots the sum of the effort from each form on a line: estimations maybe not converge.
* The team resolves any issues or disagreements that are brought up. Individual estimate times are not discussed. These disagreements are usually about the tasks themselves. Disagreements are often resolved by adding assumptions.
* The estimators all revise their individual estimates. The moderator updates the plot with the new total.
* The moderator leads the team through several rounds of estimates to gain consensus on the estimates. The estimation session continues until the estimates converge or the team is unwilling to revise estimates.

**Step 5: Assemble Tasks:** The project manager works with the team to collect the estimates from the team members at the end of the meeting and compiles the final task list, estimates and assumptions.

**Step 6: Review Results:** The project manager reviews the final task list with the estimation team.

Wideband Delphi result please refer to **Viking Delphi Estimation.xls**

# Schedule, Budget and Resource Estimates

## Schedule Estimate

Based on estimations of the participants was calculated in hours and the above project assumption we can calculate the time to complete each task in month. Schedule can be estimated based on the total time to complete the all tasks. In sheet Resource Allocation of **Viking\_Delphi\_Estimation.xls** we were calculated that Viking will long for about 9 months.

## Resource Estimate

After created Work Breakdown Structure and Schedule, we assigned resource for each task, including the roles and number of member need to do that task. For detail please refer to sheet Resource Allocation of **Viking\_Delphi\_Estimation.xls**

## Budget Estimate

When resources are assigned to each task we can calculate the salary of Viking, in addition we also have another expense was described in sheet Project Budget Summary of **Viking\_Delphi\_Estimation.xls**