**Universidad de Guadalajara**



**Centro Universitario de Los Valles**

Master of Software Engineering

**Social Media Based on Metaverse**

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**Status accounting**

Status accounting is the administrative tracking and reporting of all software items formally identified and controlled.

Software configuration status accounting records the activity associated with the other three SCM function and therefore provides the means by which the history of the software system’s life cycle can be traced.

*Defining criteria for measuring scales and procedures for money, timing, effort and team skills.*

**Policies (money).**

*Scale for Status Accounting*:

* **Objective**: Evaluate the overall financial health of the project.
* **Metrics**:
  + **Budget Variance (%)**: Calculate the variance between the planned and actual budget.
  + **Cost Performance Index (CPI)**: Ratio of earned value to planned value.
  + **Schedule Performance Index (SPI)**: Ratio of earned value to planned value.
* **Range**:
  + From 0 to 10.

*Procedures for Status Accounting*:

1. **Current-budget analysis**: First thing is to make a detailed analysis of the current budget, the estimated costs.
2. **Regular monitoring**: Implementation of regular monitoring processes to track actual costs, earned value, and planned value.
3. **Variance analysis**: Conduct regular variance analysis to identify differences between planned and actual costs.

**Policies (timing).**

*Scale for Status Accounting*:

* **Objective**: Evaluate the overall timeline of the project.
* **Metrics**:
  + **Planned duration**: The originally estimated time required for project completion.
  + **Actual duration**: The actual time taken for project completion.
  + **Schedule variance (SV)**: The difference between earned value and planned value for schedule.
* **Range**:
  + From 0 to 10.

*Procedures for Status Accounting*:

1. **Analysis of current timing**: To make a detailed analysis of the current budget, the project’s schedule outlining the start and end dates for each task/activity.
2. **Regular monitoring**: Implement regular monitoring processes to track actual start and end dates for tasks.
3. **Task progress tracking**: Regularly update the progress of each task to reflect actual completion status.
4. **Schedule variance analysis**: Conduct regular schedule variance analysis to identify potential delays.

**Policies (effort).**

*Scale for Status Accounting*:

* **Objective**: Evaluate the overall effort expended on the entire project.
* **Metrics**:
  + **Planned effort hours**: The initially estimated effort requires for the project.
  + **Actual effort hours**: The actual effort expended on the project.
  + **Effort variance (%)**: The difference between planned and actual effort.
* **Range**:
  + From 0 to 10.

*Procedures for Status Accounting*:

1. **Analyze effort estimated**: To make a tough analysis of estimation of the effort required for each task of activity.
2. **Regular effort tracking**: Implement regular time tracking processes to record actual effort hours.
3. **Task progress tracking**: Regularly update the progress of each task of effort expended.
4. **Effort variance analysis**: Conduct regular variance analysis to identify differences between planned and actual effort.

**Policies (team skills).**

*Scale for Status Accounting*:

* **Objective**: Evaluate the overall skill set within the team.
* **Metrics**:
  + **Individual skills matrix**: A comprehensive matrix outlining the skills possessed by each team member.
  + **Team skills inventory**: An aggregated summary of the skills available withing the team.
* **Range**:
  + Senior, Medium or Junior.

*Procedures for Status Accounting*:

1. **Skill assessment**: Regularly assess the skills of each team member to create a baseline.
2. **Skill matrix development**: Develop an individual matrix to create a team-wide skills inventory.
3. **Task progress tracking**: Encourage team members to regularly update their skills matrix based on acquired sills of changes in proficiency.
4. **Performance evaluation**: Integrate skill assessment into regular performance evaluations.

**Estimation of Change Requirements and comparison to actual results.**

*CR1*: User percentage time on seeing advertisements.

* **Money**: $30,000 USD (meaning 5% of budget).
* **Time**: 27%.
* **Effort**: 48% (Barely acceptable).
* **Team skills**: Hire 2 developers.
  + 1 medium-senior.
  + 1 junior.

*CR2*: The system should report statistics of user regarding time spent, log-in hours, and activities performed.

* **Money**: $45,000 USD (meaning 20% of budget).
* **Time**: 42%.
* **Effort**: 33% (good).
* **Team skills**: Hire 3 developers.
  + 2 medium-senior.
  + 1 senior.

*Total project estimation after CRs acceptance or denial*.

* **Money**: $145,000 USD (meaning 120% of total budget).
* **Time**: 142%.
* **Effort**: 133%.
* **Team skills**: Hire a total of 9 developers.
  + 4 junior developers.
  + 3 semi-senior.
  + 2 senior.

*Final results*.

* **Money**: $162,000 USD (overpassed by 4% the estimation), extra $5,000 USD.
* **Time**: 7 months (overpassed by 40% the estimation), 2 extra months.
* **Effort**: 157%, under estimated by 24%.
* **Team skills**: The skills were good regarding performance, though an extra junior dev could’ve make us deliver CRs in time.