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| Case Module : Team Problems |
| Prerequisite Knowledge: enrollment in a software engineering course. |
| <p>Learning Objectives:</p> <p>Upon completion of this module students will have increased ability to:</p> <ul style="list-style-type: none"> • describe some of the personnel problems that may be experienced by software project teams • develop solutions to team personnel problems • appreciate the need for project team members to work together effectively |
| Keywords: teamwork, team building |
| <p>Case Study Artifacts:</p> <ol style="list-style-type: none"> 1. DH Background Scenario 2. DH Team Biographical Sketches 3. DH Customer Need Statement 4. DH High Level Requirements Definition (HLRD) 5. DH Development Process Script |
| <p>Case Study Participants:</p> <ul style="list-style-type: none"> • The DH Team • Jose Ortiz, Director, DigitalHomeOwner Division of HomeOwner, Inc. |
| <p>Scenario:</p> <p>In August of 2010, HomeOwner Inc. (the largest national retail chain serving the needs of home owners) established a new DigitalHomeOwner division that was set up to explore the opportunities for equipping and serving “smart houses” (dwellings that integrate smart technology into every aspect of home living). In August and September of 2010, the Marketing Division of HomeOwner conducted a needs assessment for a DigitalHome (DH) product that would provide the computer and communication infrastructure for managing and controlling the “smart” devices into a home to best meet the needs and desires of homeowners. The Marketing Division produced two documents: the DH Customer Need Statement and the DH High Level Requirements Definition (HLRD).</p> <p>Using the documents developed by marketing, DigitalHomeOwner has launched a pilot project (called the DH project) to examine and assess the technical and developmental issues of the smart house concept. A five person team was assembled for the project in early September 2010.</p> <p>During the project launch, Jose Ortiz, the Director of DigitalHomeOwner Division, wanted to build a strong team that would work well together. Since none of the team members had worked together in the past, he designed a team activity where team members would discuss teamwork problems that they had experienced in previous projects. The team problems described at the end of the Exercise Booklet discuss some of the past problems experienced by the DH team members and ask questions about resolving the problems.</p> |
| <p>Exercise:</p> <ol style="list-style-type: none"> 1. As preparation for the case module, read the Case Study Artifacts listed above. 2. Each student will be assigned to a small team. Each team is assigned one of the team problem descriptions in this booklet, which describes a team personnel problem. 3. The team meets and discusses the problem and answers to questions about the problem. Then, they decide on various approaches that might be taken to solve the problem. |

4. Each team summarizes its discussion and conclusions in a team report. One member of their group is chosen to report to the class on the team's discussion and conclusions.

Appendices:

Exercise Booklet

Resource Information:

- [DeMarco 1999] DeMarco, Tom, & Lister, Timothy, *Peopleware: Productive Project and Teams*, 2nd Ed, New York: Dorset House, 1999.
- [Humphrey 2000] Humphrey, W.S., *Introduction to the Team Software Process*, Reading, Massachusetts: Addison Wesley, 2000.
- [Weinberg 1971] Gerald M. Weinberg, *The Psychology of Computer Programming*, New York: Van Nostrand Reinhold, 1971.

Teaching Notes:

- Class discussion and a reading assignment on team and personnel issue (e.g., from [DeMarco 1999], [Humphrey 2000] or [Weinberg 1971]) should proceed the exercise.
- This case module could be used in different level courses involving teamwork (from a freshman level introductory course in software engineering to an upper level project course).
- Although this case module designed as a team exercise, there are a couple of other ways the case could be used:
 - > This could be a teacher-led discussion of the issues related to the team problems with illustrations from the DH team problem descriptions (in the Exercise Booklet). Discussion could be guided by the questions at the end of each problem description.
 - > Students could be assigned as an individual homework assignment of studying the case module materials and completing the exercise.
- Assuming an adequate student preparation for the exercise, students should need at least thirty minutes to complete the exercise. And each team will need time to report on their evaluation. It would be beneficial to follow the team reports with a ten to fifteen minute summary of the student team results.
 - > Students should be encouraged to discuss any personnel problems they have experienced on the teams they have been part of.
- If the course involves actual student development teams, this exercise could provide a good team building experience: it could be carried out at the beginning of a course; it does not require any special technical knowledge; and everyone can participate.
- A more dynamic and dramatic case module might be to form a student team to act out a "Team from Hell", where the team members would role play the various personalities in the exercise: "Don't worry your pretty little head", "Slacker on the loose", "It's time to make some changes", and "Double Trouble". After the play, the class could discuss how to address the various problems.