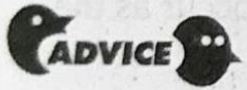
15.6.3 Review Guidelines



Don't point out errors harshly. One way to be gentle is to ask a question that enables the producer to discover the error.

Guidelines for conducting formal technical reviews must be established in advance, distributed to all reviewers, agreed upon, and then followed. A review that is uncontrolled can often be worse than no review at all. The following represents a minimum set of guidelines for formal technical reviews:

1. *Review the product, not the producer.* An FTR involves people and egos. Conducted properly, the FTR should leave all participants with a warm feeling of

accomplishment. Conducted improperly, the FTR can take on the aura of an inquisition. Errors should be pointed out gently; the tone of the meeting should be loose and constructive; the intent should not be to embarrass or belittle. The review leader should conduct the review meeting to ensure that the proper tone and attitude are maintained and should immediately halt a review that has gotten out of control.

Quote:

"A meeting is too often an event in which minutes are taken and hours are wasted."

Author unknown

2. *Set an agenda and maintain it.* One of the key maladies of meetings of all types is drift. An FTR must be kept on track and on schedule. The review leader is chartered with the responsibility for maintaining the meeting schedule and should not be afraid to nudge people when drift sets in.
3. *Limit debate and rebuttal.* When an issue is raised by a reviewer, there may not be universal agreement on its impact. Rather than spending time debating the question, the issue should be recorded for further discussion off-line.
4. *Enunciate problem areas, but don't attempt to solve every problem noted.* A review is not a problem-solving session. The solution of a problem can often be accomplished by the producer alone or with the help of only one other individual. Problem solving should be postponed until after the review meeting.
5. *Take written notes.* It is sometimes a good idea for the recorder to make notes on a wall board, so that wording and priorities can be assessed by other reviewers as information is recorded. Alternatively, notes may be entered directly into a notebook computer.
6. *Limit the number of participants and insist upon advance preparation.* Two heads are better than one, but 14 are not necessarily better than 4. Keep the number of people involved to the necessary minimum. However, all review team members must prepare in advance. Written comments should be solicited by the review leader (providing an indication that the reviewer has reviewed the material).
7. *Develop a checklist for each product that is likely to be reviewed.* A checklist helps the review leader to structure the FTR meeting and helps each reviewer to focus on important issues. Checklists should be developed for analysis, design, code, and even testing work products.

Quote:

"It is one of the most beautiful compensations of life, that no man can sincerely try to help another without helping himself."

Ralph Waldo Emerson

8. *Allocate resources and schedule time for FTRs.* For reviews to be effective, they should be scheduled as tasks during the software process. In addition, time should be scheduled for the inevitable modifications that will occur as the result of an FTR.
9. *Conduct meaningful training for all reviewers.* To be effective all review participants should receive some formal training. The training should stress both process-related issues and the human psychological side of reviews. Freedman and Weinberg [Fre90] estimate a one-month learning curve for every 20 people who are to participate effectively in reviews.

10. *Review your early reviews.* Debriefing can be beneficial in uncovering problems with the review process itself. The very first product to be reviewed should be the review guidelines themselves.

Because many variables (e.g., number of participants, type of work products, timing and length, specific review approach) have an impact on a successful review, a software organization should experiment to determine what approach works best in a local context.