Charting Events and Causal Factors

- Objective: Chart the relationship of events, conditions, changes, barriers and causal factors on a timeline.
- ECFC is the acronym for Event and Causal Factor Chart
Understanding the ECFC

- The heart of the chart is the timeline.
  - The starting and ending points should be adequate to capture all important information to the situation.
- The ECFC is especially helpful in understanding complex situations.
- The graphical nature of the ECFC helps visualize the relationships in the situation.
- The ECFC uses many basic flowcharting symbols, but there are some adaptations.

Event Sequence/Timeline

- Development Delayed 7/1/2001
- System Testing Cut short 7/25/2001
- Software Released 8/1/2001
- Customer Complaints Start 8/3/2001
- Patch Released 9/1/2001
ECFC Symbols

- Event
- Primary event
- Undesirable event
- Secondary event
- Terminal event
- Conditions

ECFC Symbols (Cont’d.)

- Causal Factor
- Presumptive Causal Factor
- Barrier
- Failed Barrier
Criteria for Event Description

- Events describe an action, not a condition.
- Events are singular.
- Descriptions are short – one noun and one active verb.
- Events should be described exactly.
- Events should be quantified if possible.
- Events are based on known facts.
- The timeline scope ranges from beginning to end of the situation sequence.
- Ordering of events should have a logical flow.

Principles for Cause-Effect Analysis

- All negative events are caused to happen.
  - They are the result of some type failure.
- Undesirable events are caused by additional causes.
  - These are called contributing causes.
- The root cause(s) can be determined by analyzing the cause-effect relationships around a primary effect.
Summary

- The Event and Causal Factor Chart is an effective way to show the sequence of events and the contributing factors to a negative event.
- Don’t get too concerned about the correctness of the symbols. Focus on the understanding of the events.
- There is no standard for this. You might want to customize it for your own purposes.

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- Certified Software Quality Analyst
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