PCOC: An Interactive COCOMO for the IBM PC

- Overview
- PCOC History
- PCOC Operational Summary
- Input/Output Capabilities
- User Definable Inputs
- PCOC Generated Outputs
- Other PCOC Features
- PCOC User Base
- Acquisition and License
Primary Characteristics:

- Based on the COCOMO method
  - COCOMO provided as the default cost model
- User tailorable
  - Calibration to a specific user installation
  - Calibration to the advancing state of the art (eg. Ada)
- Human Engineered for Managers and software engineers

Environment requirements:

- IBM PC, XT, AT, or Compatible
- 192K RAM
- Single or dual floppy disks
- Color or monochrome display
- Printer
PCOC History

- **Prototyping and Requirements Analysis**
  - Primary PCOC Requirements
  - Highly Interactive Operation
  - Effective User Friendliness
  - Modularity for Significant Upgrade
  - Flexibility to Handle Diverse Project Situations
  - Robustness to Accommodate User-Tailoring

- **Development and Test**
  - PCOC Design Features
  - Strong Data Typing
  - Generic Screen Editor
  - Data Base Driven Operation
  - Menu/Function Key Control

- **Operational Test and Upgrade**
  - PCOC Test Environment
  - Diverse Project Situations
  - 7 Test Projects
  - Upgrades Amounted to 60% of the Initial Code Volume

- **PCOC Product**
  - PCOC Product Features
  - Complete Implementation of COCOMO Method
  - User Tailorable Model/Data Base with COCOMO Provided as Default
  - Flexible Cost Analysis Capabilities
  - Highly Reliable, Robust Operation
- Development cost estimation
  - Organic, Semi-detached or Embedded modes
  - User definable mode
    - Permits calibration
- Maintenance cost estimation
- Other cost analyses
  - Software conversions
  - Design to cost
  - Cost to complete
  - Incremental development
Three types of user input:

- Function keys are used for:
  - Display control (i.e., going from display to display)
  - Program execution
  - Display unique toolbag
    - Commonly used context-specific tools
    - Examples: Print screen, Load defaults, recalculate checksums, etc.

- User-friendly screen editor
  - Positioning via cursor control arrows
  - Extensive input error checking (strong data typing)

- Program prompts for simple scalar inputs
  - For example: start month, hrs/mm, mode, etc.

Printout capabilities:

- Individual print screen (Format and print current display)
- Batch print
  - User can specify any set of PCOC displays to be printed
<table>
<thead>
<tr>
<th>User Definable Data</th>
<th>Default Values Provided</th>
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</thead>
<tbody>
<tr>
<td>Unit names, Subunit names</td>
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<tr>
<td>Software cost driver effects</td>
<td>COCOMO data base</td>
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<td>Development schedule</td>
<td>COCOMO recommended</td>
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<td>Effort partition between milestones</td>
<td>COCOMO data base</td>
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<td>Schedule partition between milestones</td>
<td>COCOMO data base</td>
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<td>Cost mode parameters</td>
<td>Embedded mode</td>
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</table>
Software Summary

- KDSI totals | Weight Averaged EAFs | Weight Averaged Complexities

Schedule Recommendations

- Recommended Schedule | Recommended Milestone Partition

Effort Estimate Summary

- Man months | Productivity | Labor Mix | Phase mix

Cost Summary

<table>
<thead>
<tr>
<th>Total Dollars</th>
<th>Average cost/MM</th>
<th>Average personnel load</th>
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<tbody>
<tr>
<td>Peak personnel load</td>
<td>fiscal year breakout</td>
<td>Calendar year breakout</td>
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<tr>
<td>Total labor profile</td>
<td>Labor category profiles</td>
<td>Graphical labor profiles</td>
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<tr>
<td>Spending profile</td>
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</table>

Other Outputs

- Error messages | Warning messages | Data quality indicators
Other PCOC Features

- On line non-interfering HELP
  - Each display has access to corresponding User's guide description
  - HELP files include:
    - Display description
    - Detailed function key descriptions
- Warning messages provided for data inconsistencies
  - Information only...User is still permitted to continue
  - Added flexibility
- Robust operation
  - Backup files saved automatically upon exit
  - All data entry checked for erroneous input
- All default files are accessible for user modification
There are currently over 130 PCOC Users in Government and Industry

PCOC Pricing:

- First copy: $850
- 2nd-10th copy: $350 each
- 11th copy on: $175 each

  - Includes Protective binder, user’s guide, 1 year free maintenance

PCOC Licensing:

- Single copy license
  - Can be used by any user on any CPU
  - Disks are copy protected