The Logic of Time Management

- You will likely spend your time this week much the way you spent time last week.
- To make realistic plans, you have to track the way you spend time.
- To check the accuracy of your time estimates, you must document them and later compare them with what you actually do.
- To make more accurate plans, determine where your previous plans were in error and what you could have done better.
- To manage your time, plan your time and then follow the plan.
Understanding How You Spend Time

- Categorize the major activities.
  - Three to five categories, initially.
  - If you later need more detail, break the categories into subcategories.
- Record the time spend on each activity.
- Record time in a standard way.
- Keep the time data in a convenient place.

The Engineering Notebook

- Used to track time and keeping other records.
- As a software professional, you will find this has many uses.
- Useful as evidence that good process was followed.
- Useful as evidence of intellectual property (e.g. patents)
The Notebook Design

• Particular design is not critical
  – Spiral bound is most convenient
  – Quad-ruled pages
  – Numbered pages

• Layout the cover as shown in example
  – Your name, etc.
  – Included dates
  – Sequence number
  – Use first few pages as TOC.
Why Track Time

• To improve the quality of your work you must first understand what you currently do.

Watt’s Experience

• The plan for writing A Discipline for Software Engineering was based upon previous experience of 26 hours per week.
• Planned to spend 20 hours on new book. Estimated completion date January.
• Data revealed he was spending 30 hours per week, but the job was bigger than expected.
• New projection, finish four months early, which he did.
Recording Time Data

• Objective is to obtain accurate data.
  – Format is not important, but
  – For the class, we will use a standard form
    • Not practical for individual forms
    • Without prior experience, it would be difficult for you to devise a workable personal form and procedure.
    • After the course is over, you will have the knowledge and experience to modify the forms and procedures to suit yourself.

Tracking Your Time

• Hours are not a useful measure
  – Generally you do not do anything for a full hour.
  – The typical amount of uninterrupted time is less than an hour.
  – Fractions of an hour are awkward. (Even if accountants love them.)
• Use minutes. (Seconds are overly precise.)
Example of Student Work Periods

Title: 
D:\c338f99\Week01\Work_Periods.eps
Creator: 
Corel PHOTO-PAINT 8
Preview: 
This EPS picture was not saved with a preview included in it.
Comment: 
This EPS picture will print to a PostScript printer, but not to other types of printers.

Time Recording Log

<table>
<thead>
<tr>
<th>Student</th>
<th>Date</th>
<th>Instructor</th>
<th>Start</th>
<th>Stop</th>
<th>Delta Time</th>
<th>Activity</th>
<th>Comment</th>
<th>C</th>
<th>U</th>
</tr>
</thead>
</table>

8/1/2001 © Paul Wolfgang 1999 13

8/1/2001 © Paul Wolfgang 1999 14
Contents of Time Recording Log

Date       The date you did some activity.
Start      The time you started
Stop       The time you stopped
Interruption Any time lost due to interruptions
Delta time Stop - Start - Interruption
Activity   Description of the activity or task
Comments   A more complete note, or the type of interruption, etc.
C          Check if activity is now complete
U          Units in the task when complete

Time Log Example

Student          Student Y
Date            9/9/99
Instructor    Prof. Z
Class          CIS xxx

<table>
<thead>
<tr>
<th>Date</th>
<th>Start</th>
<th>Stop</th>
<th>Interruption</th>
<th>Activity</th>
<th>Comment</th>
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<td>6 + 5</td>
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<td>5:11</td>
<td>25 28</td>
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</table>
Handling Interruptions

- It is surprising how often we are interrupted.
- Note the duration of each interruption. (See example)
- A stop watch is very useful for this.
- Interruptions break your train of thought, leading to inefficiency and error.

Tracking Completed Tasks

- In addition to tracking the time, you must track the results produced.
  - Attending class or a meeting, a straight recording of time spent is adequate.
  - When developing programs, reading chapters, or writing reports, you need to know how much work was accomplished.
- A unit of work could be
  - A chapter read
  - A paragraph written
  - A program written
Keep Time Log in Notebook

- To keep complete records, must have the log handy.
- Engineering notebook is a convenient place. Always have your engineering notebook with you.
- Place the time log in the back.
- When the time log reaches the other data, the book is full — Start another one.

Hints on Logging Your Time

- Keep the engineering notebook with you at all times.
- When you occasionally forget to record an entry, make an estimate as soon as you remember.
- You may use a stopwatch to track interruptions.
  - May be overly precise, but
  - It is easier than tracking individual start/stop times.
- Summarize your time promptly.
Period and Product Plans

- Period plans concern the way you plan to spend the time in a particular period (day, week, etc.).
- Product plans concern the activity such as developing a program, reading a book, writing a report, etc.
- Example — reading the textbook.
  - Product plan: Read 20 chapters in 20 hours. Schedule one hour per week.
  - Period plan: For a given week schedule the one hour of reading among the other activities.

Relationship between the Plans

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The Weekly Activity Summary

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<th>Period Times and Rates</th>
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<td>Total</td>
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</tr>
<tr>
<td>Min</td>
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</tr>
</tbody>
</table>

Summarizing Weekly Times

- List the work categories as column headings
- Enter the day/date in the first column.
- For each day, total the minutes for each category.
- Compute totals (may use spreadsheet program)
  - Total across the row.
  - Total the columns.
  - Cross check the totals.
Calculating Period Times and Rates

- Enter the total weeks elapsed.
- Copy previous week’s totals.
- Add current week’s totals.
- Calculate average, minimum and maximum.

Assignments

- Define your principal activities for this course and estimate (guess) how much time you expect to spend. (See Assignment 1, Chapter 1, in Humphrey’s book.)
- Get an engineering notebook.
- Start a time log. Effective Monday January 22 and track all time spent on this course.
- Compute weekly summaries. (Spreadsheets will be provided during the first lab session.)
- Weekly summaries will be due at each lab session for the previous week.