

## General Guidelines for Preparing Flowcharts

Flowcharts would be difficult to read and understand if they were always drawn differently and were inconsistent. To avoid these problems, people who prepare flowcharts can use the guidelines that follow. When these guidelines are used, flowcharts are more readable, more clear and concise, and more understandable. However, even with these guidelines, some differences are bound to occur, because flowcharting is more of an art than a science. The important thing for preparers to remember is to be consistent.

The following guidelines promote consistency and enhance readability in flowcharts. These guidelines were used to construct the flowcharts in this chapter.

1. Understand a system before flowcharting it. Interview users, developers, auditors, and management, or have them fill out a questionnaire; read a narrative description of the system; observe the system; or walk transactions through the system.
2. Identify the entities, such as departments, job functions, or external parties that are to be flowcharted. Identify documents and information flows in the system as well as the activities or processes performed on the data. (For example, when reading a description of the system, the preparer could draw a box around the entities, a circle around the documents, and a line under the activities.)
3. When several entities need to be shown on a flowchart, divide the flowchart into columns, label each column, and flowchart the activities of each entity in its respective column.
4. Flowchart only the normal flow of operations, making sure that all procedures and processes are in the right order. Identify exception procedures by using the annotation symbol.
5. Design the flowchart so that flow proceeds from top to bottom and from left to right.
6. Give the flowchart a clear beginning and a clear ending. Show where each document originates. Show the final disposition of all documents so that there are no dangling ends that leave the reader wondering what happened.
7. Use standard flowcharting symbols, and draw them with a template or with a computer.
8. Clearly label all symbols. Write a description of the input, process, or output inside the symbol. If the description will not fit in the symbol, use the annotation symbol. Print neatly, rather than writing in freehand.
9. Place document numbers in the top right-hand corner of multiple copies of documents. The document number should accompany the symbol as it moves through the system.
10. Precede each manual processing symbol by an input and an output. Do not directly connect two documents, except when moving from one functional area to another. When a document is moved to another functional area (another column), show the document in both functional areas.

11. Use on-page connector sparingly. Use off page connectors to move from one flowchart page to another. Clearly label all connectors to avoid confusion.
12. Use arrowheads on all flow lines. Do not assume that the reader will know the direction of the flow.
13. Try to use only one page per flowchart. When that is not possible, clearly label the pages 1 of n, 2 of n, and so on.
14. Show documents or reports first in the functional area (column) in which they are created. They can then be shown moving to another column for further processing. A manual process is not needed to show the documents being forwarded.
15. Show all data entered into or retrieved from a computer file as passing through a processing operation (a computer program) first.
16. Use a line from the document to a file to indicate that it is being filed. A manual process is not needed to show a document entering a file.
17. Draw a rough sketch of the flowchart as a first effort. In this way you can worry about content rather than about getting the drawing right. Few systems can be flowcharted without going through more than one draft of the flowchart.
18. Verify the flowchart's accuracy by reviewing it with people who are familiar with the system. Make sure that all uses of flowcharting conventions are consistent.
19. Redesign the flowchart to avoid clutter and a large number of crossed lines. Draw a final copy of the flowchart.
20. Place the name of the flowchart, the date it was prepared, and the preparer's name on each page of the flowchart.