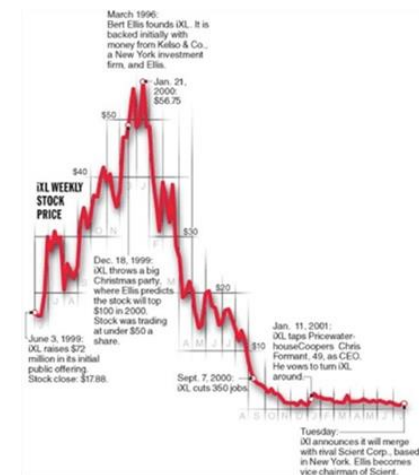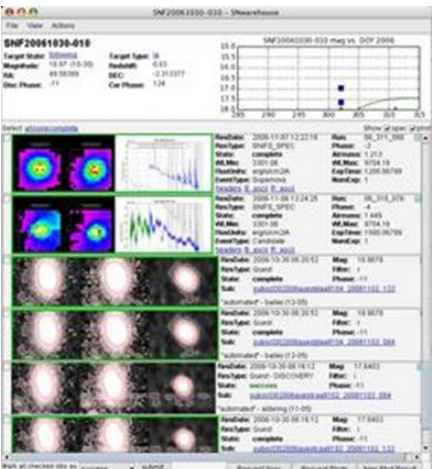# How to Evaluate a Visualization

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Critiquing a Visualization

- First, consider the purpose of the visualization and who the intended audience is.

- Then, ascertain your initial reaction.

- Then, examine the visualization in detail.

- Then, answer questions like the following.

[slide adapted from Marti Hearst]

Over-Arching Questions

1. Is the design visually appealing/aesthetically pleasing?

2. Is it immediately understandable? If not, is it understandable after a short period of study?

3. Does it provide insight or understanding that was not obtainable with the original representation (text, table, etc)?

4. Does it provide insight or understanding better than some alternative visualization would? Or does it require excessive cognitive effort? What kind of visualization might have been better?

[slide adapted from Marti Hearst]

How Successful is the Visualization?

5. Does the visualization reveal trends, patterns, gaps, and/or outliers? Can the viewer make effective comparisons?

6. Does the visualization successfully highlight important information, while providing context for that information?

7. Does it distort the information? If it transforms it in some way, is this misleading or helpfully simplifying?

8. Does it omit important information?

9. Is it memorable?

[slide adapted from Marti Hearst]

Questions about
the Visual Transformation

10. Does it use visual components properly?

- That is, does it properly represent the data using lines, color, position, etc?

- Does it transform nominal, ordinal, and quantitative information properly?

11. Does it use labels and legends appropriately?

[slide adapted from Marti Hearst]