

I **MANSI** will not receive assistance on this assignment and will follow the course syllabus and UAB Academic Honor Code

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Web page designers often combine various technologies. These technologies can be build and managed by using document object model. The interoperability such as providing powerful graphic tools which display element tree, reveal inherited style values and debug interactive scripts is not possible by DOM. The scarcity of documentation as well as ineffectual debugging may worsen the situation and also will limit the toolkit's potential. The three goals are: Compatability, Debugging, Performance.

The author specified about the components which effect the DOM and D3. This is a speculation of Protovis, and through revelatory assistant modules based on these changes, we can achieve specifications with comparable notational efficiency. And yet, D3's institutionalized portrayal improves expressiveness and accessibility, while transforms offer dramatic performance gains and enable energized advances.

D3 main aim is to behave like a kernel. D3 also contains low level graphic libraries such as Processing and Raphael.

XLST is a way in which other declarative approach to a specific document transformation is done. Here, the source data is encoded in XML which is then transformed to HTML with the help of XLST stylesheet which contains few set of instructions. Here, each instruction coincides with the source data which is used for directing that specific structure of output to the application. Handling the graphical marks will show a close mapping between toolkit depiction and also the desired results which provide reducing the time required for execution which also increases the accessibility. Even though the recent mixture of operators would provide customized view, observing and monitoring them is required.

Strength: efficient manipulation of documents based on data;

D3includes a collection of helper modules that sit on top of the selection-based kernel

Weakness: These modules are heavily influenced by prior visualization systems, including Protovis.

This makes jQuery incapable of data driven transformations, and thus ill-suited for dynamic visualizations involving complex transitions.

The smallest operand is selection on which operators perform modification on the data. The event handlers handle the data. The select() and selectAll() will be used to obtain the data. The data operator is used to bind the data to selected nodes. To perform this, the data is first passed to functional operators, along with the numeric index. The data elements which are left over are found in the enter and exit section.

With the help of explicit transformations, D3 will avoid un required computation which further leads to overhead reduction. For scatter plot- Interaction is in the following way: On each block, randomly few constituent plots are selected and also both co-ordinates are also selected wherein the coordinates indicate the section which indicates for brushing and linking. For the stacked graph, we continuously animate between two fixed sets of data values.

I infer from this paper that D3 is more important to perform visualizations as it has efficient designs and also provides better performance.