

CS846 Paper Review Form - Winter 2012

Reviewer: Preksha Sisodia

Paper Title: Statecharts: A visual formalism for complex systems

Author(s): Harel, D

1) Is the paper technically correct?

- Yes
- Mostly (minor flaws, but mostly solid)
- No

2) Originality

- Very good (very novel, trailblazing work)
- Good
- Marginal (very incremental)
- Poor (little or nothing that is new)

3) Technical Depth

- Very good (comparable to best conference papers)
- Good (comparable to typical conference papers)
- Marginal depth
- Little or no depth

4) Impact/Significance

- Very significant
- Significant
- Marginal significance.
- Little or no significance.

5) Presentation

- Very well written
- Generally well written
- Readable
- Needs considerable work
- Unacceptably bad

6) Overall Rating

- Strong accept (award quality)
- Accept (high quality - would argue for acceptance)
- Weak Accept (borderline, but lean towards acceptance)
- Weak Reject (not sure why this paper was published)

7) Summary of the paper's main contribution and rationale for your recommendation. (1-2 paragraphs)

There are three important concepts introduced: representing depth, concurrency and a way to make concurrent components communicate, which enhance the previously existing state diagrams. The advantages of these concepts is that we can obtain some level of

abstraction (by forming superstates) in designing the behavioural aspects of the system, reduce the number of states greatly (by orthogonality) and communication mechanism for concurrent components. Additionally representation of conditions, selections and timeouts graphically is an advantage over the textual representation. Actions are a way by which the statecharts generate events. Activity can be related to action in the following way: actions for instance may take place during state transitions, and a corresponding activity would be executed until the system transitions to another state.

According to me the the introduction of some strong concepts mentioned above have helped overcome the existing issues like space constraints and ease of representing information in the graphical format. Also the paper is very detailed in its description of the basic concepts of statecharts with illustrations to explain all the concepts introduced in the paper. The work seems very significant because, solutions to many weaknesses inherent in statecharts have been addressed. Thus overall the paper has a positive impact.

8) List 1-3 strengths of the paper. (1-2 sentences each, identified as S1, S2, S3.)

S1 : Detailed explanations of the concepts.

S2 : It details clearly the limitations of the statecharts and draws similarities and differences from related techniques for formalisms involving communicating finite-state machines.

9) List 1-3 weaknesses of the paper (1-2 sentences each, identified as W1, W2, W3.)

W1 : Though detailed, the paper could have been made more precise.