Clocking block overview diagrams

to illustrate taxonomy and to provide a framework for discussion

Revision information

- 26-Sep-2006, Jonathan Bromley:
 - first attempt to provide a complete set of diagrams illustrating some key features of clocking blocks, intended to clarify discussion of semantics

Typographical conventions (1)

- Terms that are intended to be used as part of a normative vocabulary are shown in *Times bold italic in a buff box*
- Placeholders for Verilog code whose meaning is taken to be self-evident are shown in *Courier bold italic*
- Verilog code fragments that form an integral part of an example are shown in Courier bold roman
- Functional elements of a clocking are shown in *Times light italic in a white box*

It is anticipated that there may be some discussion over whether these elements are an appropriate description.

Typographical conventions (2)

- Internal variables of a clocking block, whether or not they are visible or meaningful to user code, are shown by means of a large black blob: _____
 Again these features may perhaps be controversial.
- Lines, arrows and shapes drawn in thin red lines are used to draw attention to features of a diagram, or to link a feature to its annotation.
- Verilog code fragments that are part of the clocking block's enclosing module, program or interface, but not part of the clocking itself, are shown in a pale blue shadowed box:

```
initial begin
cb.ioN <= ...
```

Clocking input



Clocking output on a variable



Clocking output on a net



Clocking inout on a variable



Clocking inout on a net

