EENG 426/CPSC 459/ENAS 876
Silicon Compilation

Syntax-directed translation

Computer Systems Lab

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Guards

Guards that are built out of local variables:

- Variable interface:
  - A channel to *start the operation*
  - A dual-rail (`dualrail`) value that holds the value of the variable
  - For reads:
    - A dual-rail data channel (`a1of2`) to send the value out
  - For writes:
    - A dual-rail data channel to receive the value

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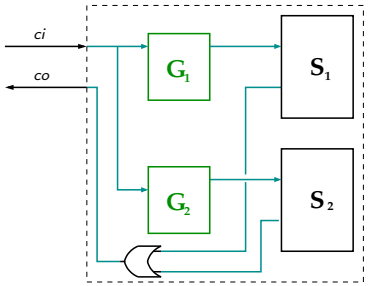
Syntax-directed translation



(In this version, only local variables are used)

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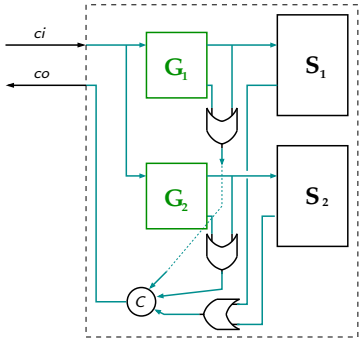
Alternative compilation of selection



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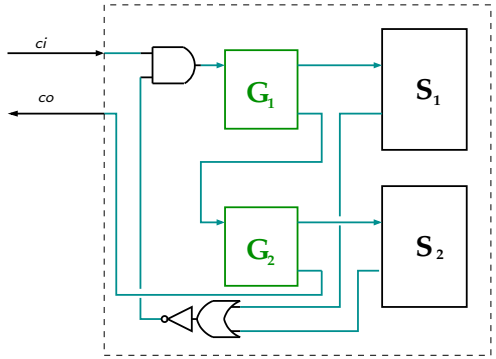
Loops



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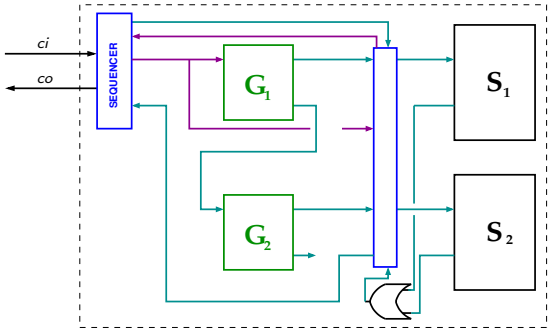
What if S_i changes G_i?



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Probed guards

How do we handle probes?

- Probes are the request line for the channel
  - The probed end is *passive*
  - If there is data, OR the two data rails
- Evaluate all the guards in parallel
- Combine them with the probe

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