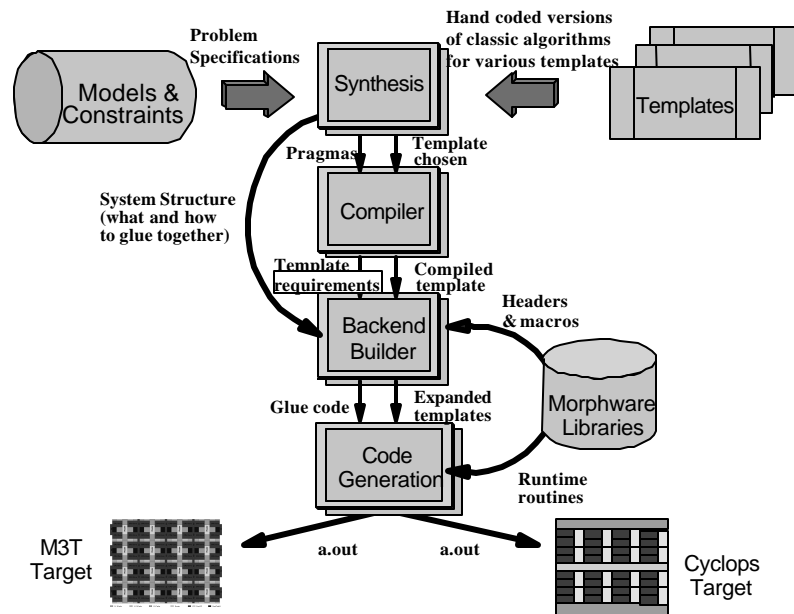


M3T: Morphable Multithreaded Memory Tiles



New Ideas

- M3T morphs into VLIW, MIMD, TaskScalar templates
- Polymorphism in every stage of the system
- M3T morphs on demand within application

Impact

- Impacted CyclopsE IBM chip that is being fabricated
- Sped up Sphinx speech processing about 2.5 times through polymorphism
- Estimated 60x reduction in size, weight, and power per channel
- Estimated 20x reduction in cost per channel

Schedule

- Aug 2002:** Full simulation and evaluation of TaskScalar template. Softcore of chip
- Q4 2002:** Integration and evaluation of tools: synthesis, compiler, backend and simulator
- Q2 2003:** Tape out of chip
- Q4 2003:** Tested prototype chip

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