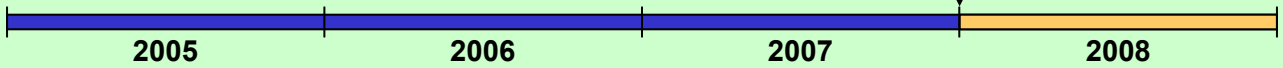
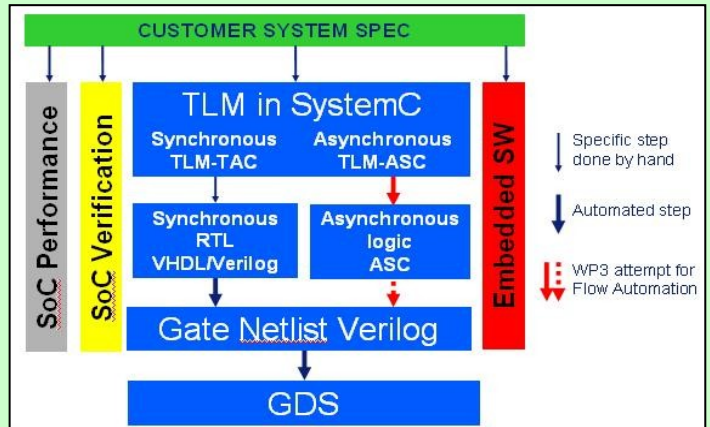


Progress & achievements after 3 years :



□ NEVA Design Flow(s)

- ✓ NEVA advanced flows benefit from new models, new tools and a new language (FXML formal language)
- ✓ Prototype versions of mainstream design flow for NoCs:
 - * from application requirements to TLM
 - * from TLM to asynchronous
- ✓ Reconfiguration management flow
- ✓ SW development flow with many options (performance analysis, SW partitioning, property awareness...)



□ Metrics

Complexity 	ANoC chip architecture from LETI includes 23 NoC units . 800 Kgates in ALPIN 65 nm test-chip from LETI	Computations required by an H264 coding (30 pictures/s) was evaluated by ST to 500 MOPS	One of the NoCs targeted by NXP includes 90 clock domains
	The type of multi-processor machines targeted by Silicomp involves 4-32 processors	Protocol validation by symbolic validation over thousands of TLM transactions (Bull)	25 functions and 100 cells in TIMA TAL asynchronous 65 nm library
Time-to-Market 	Compiled simulation executes in 3' instead of 6h, i.e. 120 times faster (ST)	SoC simulation showing a speed-up of 25% (ST) New !	A key part of the partitioning algorithm was accelerated by 18% (LIACS) New !
Run-time performance 	Frame-level parallelization hopefully leading to speed-ups between 6 and 8 (Verimag) New !	Optimizations in new release of <i>TriMedia Compilation System (TCS)</i> improve performance by more than 40% (NXP)	ANoC bandwidth multiplied by 3 vs bus-based solution (LETI)

□ Exercizing/exploiting NEVA techniques

- ✓ Reduction or memory traffic generated by an H.264 decoder to the external memory (NXP)
- ✓ Dynamic reconfiguration at run-time for high-definition image compression (ST)
- ✓ Protocol and architecture evaluation for a new family of open servers (Bull)

List of NEVA publications are available on demand

□ Contribution to standardization

- ✓ NEVA partners are deeply involved in OSCI TLM evolution (ST chairing OSCI TLM Working Group)

□ Demonstration

- ✓ FAUST, a 130 nm ANoC based architecture for Telecom applications (presented by LETI at DATE'2007, Nice, on March 17, 2007)

• TLM = Transaction Level Models,
• (A)NoC = (Asynchronous) Network on Chip