1. Goal of the meeting

- Status on VALMEM project
- LIP6: Temporal extraction integration (Pirouz/Patricia/Dominique)
- 3.2 LIP6: VHDL2TA: Automated translation of VDHL with timings into timed automaton format (HyTech/Uppaal) (Abdelrezzak/Emmanuelle)
- LSV: Parameterize model: IMITATOR2 (Etienne/Laurent)
- Publication status

2. Attendees

Emmanuelle Encrenaz LIP6
Abdelrezzak Bara LIP6
Pirouz Bazargan-Sabet LIP6
Dominique Ledu LIP6
Laurent Fribourg LSV
Etienne André LSV
Remy Chevallier ST

3. Summary of the meeting

3.1 LIP6: VHDL2TA: Automated translation of VDHL with timings into timed automaton format (HyTech/Uppaal)

- The access time (Taa) computed by this flow is providing boundaries embedding the values computed manually. However, the boundaries can be improved.
- Based on automated algorithms, the boundaries have been improved:
  \[ [253, 304] \rightarrow [258, 298] \] (target is 276)

3.2 LIP6: Temporal extraction integration

- Automated timing computation performed
- The improvement of the flow should be based on the modeling of the constraints in complex gates which improve the performances: configuration used is improving the performances whereas the flow is modeling configuration which are not used and impacts the performances.
  \[ \rightarrow \] This flow should help VHDL2TA to improve the boundaries.

3.3 LSV: Parameterize model: From IMITATOR to IMITATOR2

- IMITATOR2 is improving the performances a lot by using dynamic graph modeling. The simplified SPSMALL runs in 1 minute instead of 1 hour and half.
- However, the full SPSMALL cannot be verified
  \[ \rightarrow \] The next investigation is to replace the matrix constraints modeling approach by polyedra constraints modeling (targeting June)
4. Actions

- Administrative
  - Follow-up the ‘Accord de consortium’ story (All) [asap]
- Provide by hands the timings expected by the new timing methodology (LIP6/Temporal extraction)
- Based on timing provided manually, compute the new boundaries (LIP6/VHDL2TA)
- IMITATOR2 improvement with polyedra constraint modeling (LSV)

5. Next meeting

The next meeting is planned in LIP6 at the end of June.

6. Deliverable overview

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Deliv.</th>
<th>Resp.</th>
<th>Target</th>
<th>status</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1.1</td>
<td>State of Art in eSRAM conception</td>
<td>R</td>
<td>ST</td>
<td>0→6</td>
<td>Done</td>
</tr>
<tr>
<td>D1.2</td>
<td>Build web site for the project</td>
<td>R</td>
<td>LIP6</td>
<td>0→6</td>
<td>Done</td>
</tr>
<tr>
<td>D1.3</td>
<td>Description of the conception flow applied on a study</td>
<td>R</td>
<td>ST</td>
<td>6→12</td>
<td>Study 1 done Study 2 done Study 3 not started Run time of conception flow done</td>
</tr>
<tr>
<td>D2.1</td>
<td>State of art in memory verification methodologies</td>
<td>R</td>
<td>LIP6</td>
<td>0→6</td>
<td>Done</td>
</tr>
<tr>
<td>D2.2</td>
<td>Definition of a new functional and timed model</td>
<td>R</td>
<td>LIP6</td>
<td>0→6</td>
<td>Done</td>
</tr>
<tr>
<td>D2.3</td>
<td>Mixing of abstraction methods and temporal characterization</td>
<td>R</td>
<td>LIP6</td>
<td>6→12</td>
<td>Done</td>
</tr>
<tr>
<td>D2.4</td>
<td>Abstraction tool prototype</td>
<td>P</td>
<td>LIP6</td>
<td>12→48</td>
<td>ongoing</td>
</tr>
<tr>
<td>D3.1</td>
<td>Temporal automaton modeling adapted to memory</td>
<td>R</td>
<td>LSV</td>
<td>6→12</td>
<td>Done</td>
</tr>
<tr>
<td>D3.2</td>
<td>Temporal automaton model checking adapted to memory</td>
<td>R</td>
<td>LSV</td>
<td>12→18</td>
<td>Done</td>
</tr>
<tr>
<td>D3.3</td>
<td>Verification tool prototype</td>
<td>P</td>
<td>LSV</td>
<td>12→24</td>
<td>Done</td>
</tr>
<tr>
<td>D4.1</td>
<td>Description of the conception flow applied on other studies</td>
<td>R</td>
<td>ST</td>
<td>12→18</td>
<td>Not started</td>
</tr>
<tr>
<td>D4.2</td>
<td>Experimentation of prototypes on real study</td>
<td>R &amp; D</td>
<td>ST</td>
<td>18→48</td>
<td>ongoing</td>
</tr>
<tr>
<td>D4.3</td>
<td>Comparison of results from current verification methods and new methods</td>
<td>R</td>
<td>ST</td>
<td>30→48</td>
<td>ongoing</td>
</tr>
</tbody>
</table>

The targets are described in months.
Delivery naming: (R: report / P: prototype / D: demonstrator)
wk: week number
Q: quarter