

Discussion of the Feedback from EC after the 1st Technical Review on March 14, 2007 and *next steps*

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6th MASCOT PSC Meeting, Barcelona, 21 May 2007

1a. Overall Assessment



- Good to excellent project (**highest mark**)
- Comments:
 - The research in WP1 focused on the design of space-time codes, MIMO receiver schemes, and MIMO subcarrier allocation strategies. A key result from WP1 are the newly developed multiuser space-time codes.
 - WP2 focused mainly on the implementation of reduced-complexity receiverside algorithms. A key result from WP2 is the VHDL implementation of tree-search algorithms as a reduced-complexity detection scheme.
 - **The commercial licensing of the VHDL library to the industry would be an excellent result for the project.**

⇒ No comments were given on WP3.

1b. Recommendations



- Excellent progress has been achieved with well thought-out approach. Theoretical results have been prepared. The quality is good. The results of the packages have not resulted in a joint system result yet. This may happen during the next 24 months.
- A minor concern is around the Project's ability to fully demonstrate the advantages of their work when compared to competing alternatives.

⇒ What is meant by a „joint system result“ ?

The library of VHDL reference designs !

⇒ The EC asks us to benchmark our results more aggressively against the work of others

1b. Recommendations (cont'd)



To that effect the recommendations are:

1. **Nokia should be more involved as a partner in the demonstration aspects** of the Project, and should provide the guidance w.r.t. commercialisation and exploitation of the Project's results.
2. In the next 24 months some time should be dedicated to **planning of the demonstration with an aim to attract potential investors.**

Questions to Ari:

How can Nokia be more involved in demonstration aspects?

How can Nokia help with commercialisation/exploitation?

Action Item for Andy Burg and Ari Hottinen: Identify colleagues within Nokia (e.g. Bochum?) who implement 802.11n products in VHDL

Questions to Helmut:

What demonstration can we show during the first ETHZ open-house event? (M24 == December 2007)

Shift ETHZ open house event to January 2008.

2. Objectives



- Objectives have been **achieved** for 2006
- Overall objectives are **still relevant**
- Overall objectives are **achievable**

2c. Do you recommend changes in objectives in order to keep up with the current state-of- the-art?

- **No changes are recommended**

- **Comments:**

- **It could be beneficial if those involved in WP1 could formulate computational HW structures and HW complexity metrics. That would be helped by greater cross-WP collaboration.**

- Actually this was covered in MASCOT D2.1.1, but this was not noticed in the review

3. Workplan and Resources



- Progress is satisfactory
- Some WPs are slightly delayed while others are ahead of their plan.
- It appears that this is a result of some issues with resource allocation.
- Overall, the Project has made good progress and the delays are minor and catered for.

3d.



- Have resources been deployed as foreseen in Annex I, overall and for each participant?
- Majority of the partners have underspent their planned resource allocation, except the ETHZ, who have overspent.

4a. Work planned for the next 18-month period



Is the proposed update to the implementation plan satisfactory?

- Scientifically: Yes

Comments:

- The project is ambitious and a lot work remains to be done. The Project should remain focused, especially WP2. **Features that should be tested in the demonstrator need to be frozen soon in order to achieve the project goals in time** and allow for the last minute changes should that be necessary.

We agree on a prioritised list of demonstration goals at this meeting.

4b. Work planned for the next 18-month period



4b. Is the proposed update to the implementation plan satisfactory?

- Management point of view: Yes

Comments:

- There is no clarity on resource utilisation per partner w.r.t. project timeline, just w.r.t. WPs. However the distribution of work seems well thought.

⇒ *Does this comment indicate recommended changes? I don't think so. Therefore, I propose to keep our management instruments (Excel planning and reporting sheets, etc.)*

4c. Work planned for the next 18-month period



4a. Is the proposed update to the implementation plan satisfactory?

- Dissemination, exploitation, training, science-society, further integration: Yes

5. Consortium partnership



- Our collaboration was effective

Comments:

- within WPs the links between the participants are strong and very productive.
- However, greater cross-WP collaboration would be beneficial.
- Joint publications are encouraged.

⇒ We can improve on cross-WP collaboration with our internal workshop which we organise on December 03-04, 2007 @ UNICAL

In my view: no other issues



- Our inter-action with other FP5- and FP6-projects satisfies the EC.
- They love the idea of the VHDL library commercialisation
- They find our web-site nice

⇒ Future roadmap



- We need to plan our next deliverables
- We should agree on our demonstration today
 - Goals and associated roadmap
- We should plan our internal MASCOT workshop in Autumn 2007.
 - Who wishes to host the workshop?
 - We need to agree on a date today!
- What about our IPR portfolio?

Upcoming Deliverables



D3.1.1 (Editor: Giorgio), due 30.06.2007

D1.2.1 (Editor: Emanuele), due 30.06.2007

D2.1.2 (Editor: Helmut), due 30.06.2007

D4.4 (Industry course organised by FTW), ? 07.2007

It is shifted to Mid November 2007 and organised bei Nokia in Helsinki.

D2.3.2 (MIMO-MAC extensions, resp: ETHZ), **12.2007**

D5.4 (2nd annual project review, resp: FTW), **12.2007**

D3.1.2 (capacity regions, resp: PoliTo), **12.2007**

D1.3.1 (basband algos, resp: VUT), **12.2007**

D4.5 (1st ETHZ open-house event), **12.2007**

Suggested demonstration goals (status May 2007)



- A. Rate adaptation with one access point and two terminals
- B. Linear (MMSE) preequalization, reusing the MMSE detection unit
- C. Scheduling with one access point and 3-4 stations
- D. MU-MIMO Detector with close-to-ML performance
- E. MU-MIMO System with variable amounts of collision

*See also today's slide set on WP2 status,
specifically slide #10.*

*Priorization is needed in case of future difficulties:
I believe that goals A and C are more important than B.*

IPR portfolio



- t.b.d.