

## MINUTES

This text is to be considered as the official document provided for by art. 6.2.5 of the signed FTK-IAPP Consortium Agreement

### Participants:

Mauro Dell'Orso – UNIPi, Project Coordinator, Chair	present in Pisa
Kostas Kordas – AUTH, WP 7 Coordinator, Member	connected by skype from CERN
Dimitrios Sampsonidis – AUTH, WP 8 Coordinator, Member	connected by skype from CERN
Paola Garosi – CAEN, WP 2 Coordinator, Member	present in Pisa
Francesco Crescioli – CNRS, WP 6 Coordinator, Member	connected by skype from Paris
Andreas Sakellariou – PRIELE, WP 1 Coordinator, Member	connected by skype from Athens
Marco Piendibene – UNIPi, WP 5 Coordinator, Member	present in Pisa
Chiara Roda – UNIPi, WP 4 Coordinator, Member	present in Pisa
Betty Magnin – CERN, WP3 Coordinator, Member	connected by skype from CERN
Calliope Louisa Sotiropoulou – AUTH, Representative Member	connected by skype from Tessaloniki

### Other Participants:

P. Soukoulis, K. Mermikly (on skype) – Prisma  
C. Gentsos (in Pisa), C.L. Sotiropoulou (on skype) – AUTH  
A. Iovene (on skype) – CAEN  
S. Citraro, P. Giannetti, P. Luciano (in Pisa), S. Donati (on skype) – UNIPi  
G. Calderini (on skype) – CNRS  
D. Magalotti, A. Annovi (on skype)

Scheduled presentations are available at the site:

<https://agenda.infn.it/conferenceDisplay.py?confId=6997>

### **Presentation by Mauro Dell'Orso & Paola Giannetti.**

We have anticipated the EB with respect to the former decision of handling the GA and EB together at M11, in order to make important decisions.

#### **1) Selection for a 1-year Senior Visiting Scientist position at the LPNHE Paris (CNRS)**

The Steering Committee of the FTK-IAPP project has thoroughly examined the CVs of the two applicants:

- 1) Roberto Beccherle;
- 2) Shaikh Sarfaraz Ali

On the basis of the CVs, the Steering Committee unanimously pre-selected Dr. Roberto Beccherle as the only eligible candidate for the position.

Since there is only one candidate left, the interview becomes redundant and, on proposal of the chair, the Board directly examines the eligibility of Dr. Beccherle, the only candidate left, skipping the interview step.

The CV of Dr. Beccherle is unanimously judged as more than adequate with respect to the requirements of the call.

The Executive Board unanimously approves the final selection of Dr. Roberto Beccherle.

## 2) Discussion on the possible collaboration with the People-ITN project INFIERI.

The discussion about this possible collaboration points out the need of more informations before making a final decision. A concern is the protection of the intellectual property. The Executive Board instructs the FTK Deputy Project Leader, Paola Giannetti, to contact the Thales company, which participates to the project INFIERI, in order to gather these informations.

The following letter is sent by Paola Giannetti to our contact at Thales:

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Dear Fabrice

Let me introduce myself:

I am Paola Giannetti the Deputy Project Leader of the FTK Project in ATLAS and the person that together with Mauro Dell'Orso coordinates the IAPP FTK project funded by FP7.

As you know we have as an important part of our IAPP program (and FTK goal in general) the development of the VHDL code for a system of 3 chips that exists now on separate packages and we are going to test on a small board, but their final goal will be to fit on a single package (SIP). This unit is for image processing into high energy physics (HEP) and has possibilities to be used also outside HEP.

Following the presentation of Fabrizio we learned that your company and your availability to train a PHD student inside the INFIERI project would be perfect for our goal, we could be complementary to each other, since we have large expertise for the code developing (VHDL mainly), the inside of our SIP, and you have the complementary expertise for the outside, from the pads on silicon to the package pins.

Our collaboration would be really challenging because you are an European company and this first interaction could be a perfect opportunity to prepare a further application together in Horizon 2020. Up to now we collaborated with IMEC, but this was not ideal for FP7 because IMEC is a research Institute and the work is subcontracted outside of Europe.

We have a team of students working on the firmware and one of them could be trained by you in INFIERI. However this can be done only if the whole IAPP collaboration (that also tried recently a STREP application in FP7 and would like to try again in Horizon 2020) will be happy of this new collaboration between FTK and INFIERI.

So we discussed the possibility and some concerns were raised:

(1) let's suppose that the IAPP working group will provide the firmware (the VHDL code should be considered an IP core provided by IAPP and FTK) and INFIERI will provide the studies and guidelines for the multi-packaging. The first request from my colleagues was: let's ask to the PO if this could be a problem, since a single research program could appear to be funded two times by FP7. In my view, it is not the same work but complementary because we could cut the boundary on the pads, inside is IAPP work and from pads to pins is INFIERI work.

(2) the main request from the IAPP collaboration is that the boundary should be well defined in a NDA, where we define that the IP core (the firmware) is IAPP-FTK background and cannot be released to anybody in INFIERI. The designers will listen CMS requests trying to satisfy them, but the property of the code will be just for the FTK project. So the collaboration asks to describe well the background to be included in the NDA. If I understand correctly Fabrizio suggests that Thales and not INFIERI will sign the agreement

(3) the third question from IAPP collaboration was: can we know which are the deliverables and the milestones that this work should produce in INFIERI? They are certainly stated at the application time. Will they be compatible with the IAPP participation? Will be compatible with a very limited INFIERI participation, ..... only Thales and a couple of INFN persons?

(4) we should state clearly how the publication on this item would be signed.

In conclusion, I am optimistic that we can do it, but we are not expert and we need some time to convince ourselves that the procedure is correct and legal. The collaboration would like to see a draft of the agreement, the background description, the deliverables and milestones before making a final decision. I hope this is acceptable by you.

We could meet sometime at CERN or in Paris, to define the material we have to provide to the IAPP collaboration. I also want to thank you very much for your interest, your collaboration in the previous presentation of INFIERI and Thales made by Fabrizio to IAPP PHD students, and your patience.

Regards

Paola

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### 3) Next FTK workshop and training dates.

We will spend the week March 17 - 22 in Greece.

The FTK workshop is scheduled in Alexandroupolis for the first two days: March 17 & 18.

The next four days, March 19 - 22, Tessaloniki will host the *Training and Workshop on Modern Circuits and System Technologies*.

The EB also discusses about the trainings and outreach events to be held in the next summer. We have to organize a training at CERN. The proposed subject is "*Technology: (a) CERN practical experience for the development of high density electronics boards, (b) know-how for quality assurance practices in board manufacturing*". This training will include a visit to the TE-MPE-EM infrastructures.

We should also schedule the Summer School. The proposal to include a set of seminars in the list of events dedicated to the summer students at CERN seems reasonable. These seminars could be enriched by some interactive workstations and posters in order to combine the school with the outreach activity, such as the IAPP open day or the FTK open workshop.

As an alternative, we could organize the outreach activities at home. In this latter case, we should better advertise them than we did in the past, in order to increase participation.

#### ***Presentation by Paola Giannetti.***

### 4) Hardware development and tests this year.

Paola first summarizes the hardware development and the tests expected during this first year, then she lists again the corresponding HW milestones and deliverables for the first year, underlying which ones are ready and which ones are still to be reached/prepared.

#### ***List of 2013 Milestones***

Milestone no. & name	WP	Delivery	Comments
	Leader	date	
M.4.1. Demo general simulation ok	UniPisa	<b>M6</b>	Demonstrator simulated architecture ok
M.1.1. Slp2 prototype ok at Priele	PRIELE	M12	SLP2 prototype validated at PRIELE
M.1.2. Prototypes Atlas Review	PRIELE	M12	Atlas evaluation of FTK prototypes
M.2.1. Demonstrator ok at Caen	CAEN	M12	Demonstrator runs flawlessly at Caen

#### Status of Milestones:

**M.4.1 100% satisfied** already last June (see EB in June)

M.1.1. good status of SLP2 work (see Piendibene, Donati talks); we expect to be in time for M12

M.2.1. Integration with AUX card with Chicago people on going; good shape for M12.

M.1.2. Prototypes Atlas Review: Let's organize them after complete tests of SLP2. In time for M12

#### ***List of 2013 Deliverables (RED to be done – missing; blue OK, done)***

Del. no. -	Deliverable Title	- Nature - Dissemination level -	Delivery date
D.2.1.	VS infrastructure at CAEN for demonstrator integration ( <b>Kostas</b> )	R(CAEN) RE	<b>M6</b>
D.4.1.	FTK Demonstrator detailed simulation ( <b>Piendi-Donati-Maga.</b> )	R(UNIP) RE	<b>M9</b>
D.4.2.	Test Vectors for the FTK demonstrator ( <b>Piendi-Donati-Maga.</b> )	R(UNIP) RE	<b>M10</b>
D.2.2.	FTK demonstrator fully integrated with old power supply ( <b>RD13</b> )	Pub PU	M12
D.1.1.	SLP2 prototype constructed at PRIELE	( <b>IEEE13</b> ) Pub PU	M12
D.6.1	Test bench	( <b>Calderini</b> ) R(LPNHE)RE	M12

Status of Deliverables:

The work has been done for all the Deliverables, we miss only the **secondment reports** and the **related Deliverables** written by the WP leaders.

Paola then also presents the outreach milestones and deliverables:

### List of Milestones

M.7.1.-M.7.3. Open Days results verification AUTH **M8**, M20, M32  
M.7.4. –M.7.6. WorkS. days results verification AUTH **M6**, M18, M30 **JULY**  
M.7.7. –M.7.9. Summer schools results AUTH **M7**, M19, M31

### List of Deliverables (RED to be done – missing; blue OK, done)

D.7.1. IAPP project open days	R	PU(Paola) <b>M7</b> , M19, M31, M43
D.7.2. Workshop days	R	PU(Paola) <b>M5</b> , M17, M29, M41
D.7.3. Summer school weeks	R	PU(Paola) <b>M6</b> , M18, M30, M42
D.7.4 D.8.3 WWW site for dissemination	R	PU(Kostas) <b>M6</b> , M18, M30, M48
Status of Web site		
D.8.1. FTK Workshops	R	RE(Paola) <b>M1</b> , M13, M30, M46
D.8.2. Trainings (next is AUTH)	R	RE(Paola, CAEN) <b>M1</b> , <b>M5</b> , M13, M19, M29, M47

A summary of what has been done is reported and the rest has been planned.

- The FTK IAPP project web site has been moved by Kostas Kordas from Pisa to AUTH.  
[http://www.pi.infn.it/~kordas/FTK\\_iapp/](http://www.pi.infn.it/~kordas/FTK_iapp/) → <http://ftk-iapp.physics.auth.gr>

The board reminds that it is care of the **WP leaders** to complete the reports (**deliverables**).  
In case of outreach activities, the Institution that organizes the event should strongly contribute.  
We have satisfied the **Outreach Milestones**, by analysing the results of the performed outreach.  
The board comments that the School was very successful; also the open day was successful, although limited to poster presentations. For the open workshop, on the other hand, much more advertisement is required as well as a date more suited for the students than that of July.

## 5) Updated Gantt Chart

The ATLAS schedule and the IAPP Gannt Chart are shown one over the other, with the deliverables and the plans for the future. The Gantt Chart recently approved by the PO is also attached to the Paola's talk.

## 6) Presentations to conferences and publications

All papers are collected here: <http://www.pi.infn.it/~paola/IAPP/publications/>  
All talks and posters are collected here: <http://www.pi.infn.it/~paola/IAPP/talks-posters/>

Calliope: talk at ICATPP13 and poster at IEEE13:	2-D clustering implementation on FPGA
Saverio: talk at RD2013:	AMBFTK-LAMBFTK-AMchip04
Daniel: talk at ICATPP13:	From AMBFTK to AMBSLP
Agostino: poster at IEEE13:	The new system: AMBSLP + miniLamb + new chip
Guido: talk at TWEPP:	General on FTK

## 7) Reports of secondments

*(see the slides at web site)*

"Test stand at CAEN"	by F. Crescioli
"Next FTK Training at AUTH"	by C.L. Sotiropoulou
"SLP1 fimware development and simulation"	by C. Gentsos
"Test stand at Prisma and tests in Pisa and Prisma"	by M. Piendibene.
"Software developments for AMB tests"	by S. Donati
"WP 6 - tests at CAEN "	by G. Calderini
"Web site status report"	by K. Kordas.
"Electronic-only signature and submission of financial statements REMINDER"	by P. Giannetti

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As provided for by art. 6.2.5 of the Consortium Agreement, these minutes are the formal record of all decisions taken; the Coordinator shall safeguard them.

If requested, the Coordinator shall provide authenticated duplicates to the Parties.

Signed: Mauro Dell'Orso