Open Innovation Platform/OpenPICs meeting with PO

Minutes

Monday 21 November 2016 12.30 to 17.30

Attendence – Kevin Williams (TU/e), Meint Smit (TU/e), Huub Ambrosius (TU/e), Longfei Shen (TU/e), Weiming Yao (TU/e), Katarzyna Lawniczuk (Bright Photonics), Ronald Broeke (Bright Photonics), Luc Augustin (Smart Photonics), Roel Daamen (Smart Photonics), Nicole Derksen (PO), Ewit Roos (PhotonDelta), Saeed Tahvili (Effect Photonics), Karin Appeldoorn (PhotonDelta)

Project Administration (Nicole Derksen)

Nicole Derksen explains the main procedure for reporting in the OpenPICs project. Those include

- Half-year reporting consisting of technical and financial part. She checks the financial reporting and her colleague checks the technical part of the report.
- At the end of project, check at working place will be performed.
- Regulations to abide by are more complex than in usual European Union projects (e.g. H2020, FP7) due to provincial co-finance agreements.
- All costs and payments need to be within the time duration of project to be eligible for reimbursement.
- EFRO proof project administration is required: invoices should be specified to this project, date should be stated.
- Differentiation between type of work between article 25 and 27 of AGVV Kaderregeling depending on industrial research or experimental development.
- Acquisition of working hours is required on a monthly basis with dated signatures whereas those sheets can be sent together with the reporting every half year to the PO.
- Investments above 30000 € require a tender process
- Travel costs need to be captured in detail, including kilometers, dates etc, in a way that makes it possible for the PO to relate the travel to this project.
- Publications from project results should include acknowledgement clause. For that, get in contact with http://www.stimulus.nl/contact/, which also provides logos for presentations etc.
- [**Action, Kevin**] Project partners will come up with cost registration model for cleanroom related costs and discuss that with PO. Problem are difficulties in tracking of single items in a cleanroom working environment.

Introduction (Kevin)

Kevin gives an overview of the project and its main goals.

WP1: Market Demand (Meint)

Meint gives overview of work package 1, on identifying market demands. Main discussion points include:

- Deliverable in Feb, 2017, specifying and defining the demonstrators both from Effect and Technobis. This is closely related to WP 3.5. **Saeed** is agrees to take the lead.
- Survey is of technical kind and almost finalized and to be sent to selected users and customers.
- Effect raises the idea to highlight functional value of integration in the survey.

- Survey is used to shape the JePPIX roadmap for 2018+
- Discussion on target group of the survey. Meint sees 30-40 user replies from specialists and component level R&D people appropriate. Effect and Smart suggest to include system level people into target group.
- KPI indicator should include number of MPW users but also number of successful conversions to commercial product lines

WP2: Process Characterization (Roel)

Roel gives overview of Process Characterization work package with the main points:

- Smart scheduled MPW runs every 3 months with wafer verification tests
- Start of 3"wafer and semi-insulating run by March 2017
- Tracking of parameters and BB performances per run over time
- [**Action, Smart, asap**] Release of initial data set for BB and process statistics from historical 2"runs

WP3: Building Block Improvement (Weiming)

WP 3.1 Building Block Improvement: presentation of concepts for modulator, RF line, low-loss WG, high-precision filter and tunable laser:

- Effect suggests that 112 Gbaud is too high a target baud rate due to lack of electronic drive and test capabilities
- Effect suggests to specify in an early stage the testing aspects of WDM demonstrator
- Effect suggests narrow (<5 µm) but thick (4-5 µm) CPW lines for better modulator RF performance.
- Agreement on development towards a common platform with compatibility for all building blocks.
- [**Action, Bright/Tue, asap**] Include low range tunable laser into BB planning

WP 3.2 PDK Content is presented with list of milestones and deliverables.

WP 3.3 Building Block Characterization

- Discussion on differences and overlaps between process and wafer control testing (WP 2, Smart) and BB performance characterization. Test structures for both tasks will be fixed and put on cells with great overlap and synergy.
- Smart requires process control module/testing to give indication on a pass/fail criteria for fabricated wafers
- BB characterization test structures are used to fill in content for PDK and give statistical information of its performance
- Cell size in MPW will remain as of now as no immediate reason for change was identified.

WP 3.4 Design Environment is presented by Ronald

- Unified work flow describing the procedure from application specification to GDS creation is suggested involving all levels of software products, connecting to the design framework.
- PDK data needs to be stored centrally and accessible to different parties, each operating with different views.
- Designer is responsible for integrity and correctness of delivered layout outside of encapsulated BBs. For that GDS level DRC is needed.

- More functionality for GDS level checking and layout vs schematic checking will be the focus in order to achieve time saving in the mask layout phase and give more emphasis to specification phase of the entire workflow.

WP 3.5 Demonstrator concepts are briefly presented.

WP4: Process Improvement (Longfei)

- [**Action, Longfei, Weiming, asap**] Adapt work plan to explicitly include Lionix activities as these are missing at the moment.
- [**Action, Longfei**] Rework 4.1-4.3 time schedule to incorporate more parallelization of tasks to account for long development times in many items.
- A separation between device width and gap between devices is suggested instead of combining both into the same specification.
- Presentation of parameter matrix with current platform capabilities and possible capability after project.

Miscellaneous

- Project short name is OpenPICs, part from Open Innovation + PICs.
- Extensive documentation on regulations and resources are found here: http://www.stimulus.nl/opzuid/documenten/
- A website is requested – can be hosted at jeppix.eu