PhotonFAB

Silicon Photonic IC Fabless Access Broker

Support Action
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Deliverable 1.7 – Access logistics and operational framework: guidelines beyond project

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Dissemination Level		
PU	Public	**x**
PP	Restricted to other programme participants (including Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential	

1 Scope

This document describes the guidelines for the operational, legal and financial implementation of the access services beyond the PhotonFAB project.

2 Guidelines

Also beyond the PhotonFAB project, users will be able to prototype silicon photonic ICs through the services set up by ePIXfab.

2.1 Standard and early access

The access to technology is divided into two parts: 'standard' access and 'early' access.

- Standard access meaning that MPW shuttles in these technologies have been run one or multiple times already, so that sufficient experience has been built up.
    - Access is implemented by Europractice IC service, including:
        - The first-line technical user support
        - Design registration and checking
        - Legal implementation (Design Kit License Agreements, Terms and conditions, ...)
        - Financial: invoicing of users
    - These runs are organized based on self-generated revenue.
- Early access meaning that an MPW shuttle is ran only for the very first or second time. For such runs, funding is sought.
    - The intention is to give access to high-end, very young technology. The first runs take a large overhead to implement.
    - After an evaluation period, the technology may be transferred to Europractice.

In both cases, Imec is the legal body implementing the brokerage services and the legal and financial partner of the user. Imec sets up the necessary contracts with the foundries to organize the operational, financial and legal details of offering the foundry technologies.

2.2 Supporting companies

MPW runs are also open to companies. However, with every company the fabs will typically first study if working through the MPW scheme is in the best interest of the company:

- The user may require different specifications, either in performance or in technology modules (e.g. layer thicknesses, implant conditions,…) than what is available from the MPW service
- The user may also have timing or design size requirements that are not very well compatible with MPW.

Therefore, when a company comes In through ePIXfab/Europractice, the company will need to discuss with the relevant fab(s) first in a bilateral way.

2.3 Other IC technologies

Other MPW services may offer technologies that are relevant to the ePIXfab customers. As silicon photonics technologies are just emerging, they are relatively speaking small use technologies and it makes sense to aggregate demand on MPW shuttles organized by one service (Europractice, opSIS, IME, etc.). This could be accomplished by cooperation if that is beneficial for all parties. In addition, region-speficic support measures for e.g. support and training could be set up.

The ambition is to discuss these topics with the other MPW services on a yearly basis.

2.4 Integration and packaging

Today, only IC fabrication services are available from ePIXfab. Starting fall 2011, this will be complemented with integration and packaging services in a broader consortium. This broad consortium includes Imec (Belgium), CEA (France), VTT (Finnland), Tyndall Institute (Ireland), TNO (Netherlands) and IHP (Germany).

The operational framework should be similar to the MPW service. However, the non-disclosure and legal details are more complex: information from each customer will only be disclosed to those partners that are involved with the customer in providing it with the design, chip or integration/packaging technology.

2.5 Other guidelines

- Access should be administratively simple for the user: as much as possible one contract and one way of working only.
- As much as possible, both the technical and the administrative/legal implementation needs to be standardized. This reduces various cost and risks: administration cost, risk for errors and in the end the bare cost of the chip.
- As much as possible, recurrent technical and administrative tasks need to be automated. In this way, manpower can be more focused on innovation in the offer and operations.