R & D status in EUVL program in Japan

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New R&D Consortium in Japan
Are going to start !!

EUVL R & D Program in Japan (1)

(Press Released on June 10, 2011)

EIDEC Ltd.

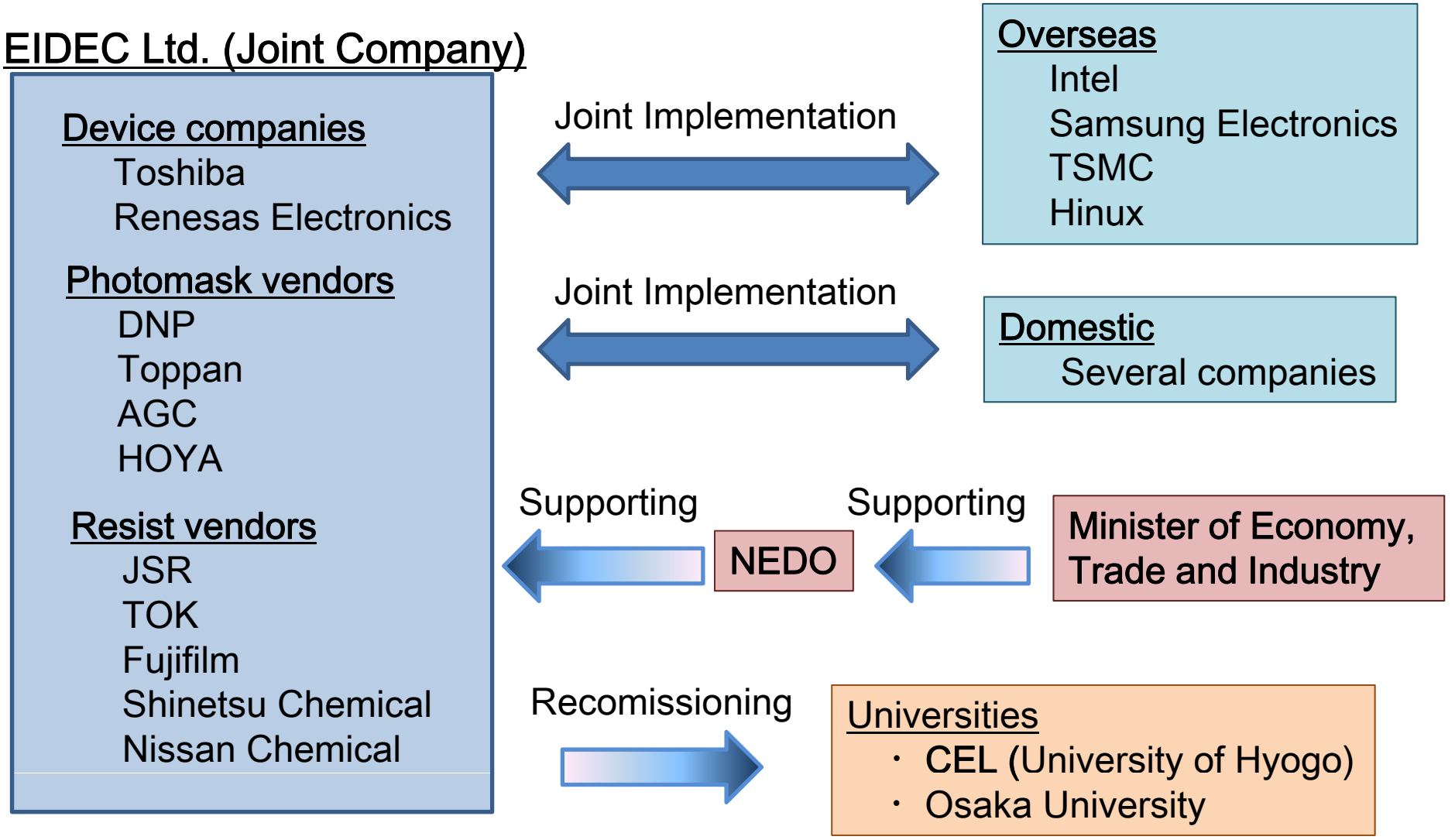
(EUVL Infrastructure Development Engineering Center)

EUVL for 16 nm node and below

1) Defect inspection of EUV mask blanks
2) Defect inspection of EUV finished mask
3) EUV resist (Material, Patterning, Outgassing)

Period: From 2010 to 2015 (Fiscal years)

EUVL R & D Program in Japan (2)
(Press Released on June 10, 2011)



“Center for EUVL (CEL)” was established in “University of Hyogo” on Oct. 1, 2010.

Center for EUVL, University of Hyogo

"Center for EUVL" was established on Oct. 1 2010.

How to contribute with the EUVL technology to be advanced?

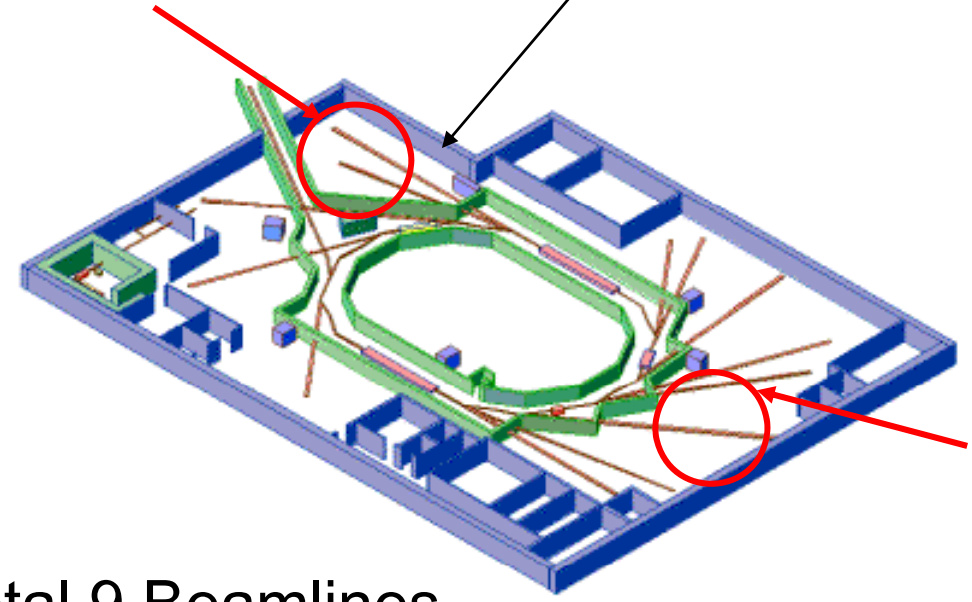
1) Useful equipments which we have developed for EUVL technology in NewSUBARU can be opened for common use.

2) We will make efforts to receive the user's comments and requirements to support the EUV lithographic technology for the practical use.

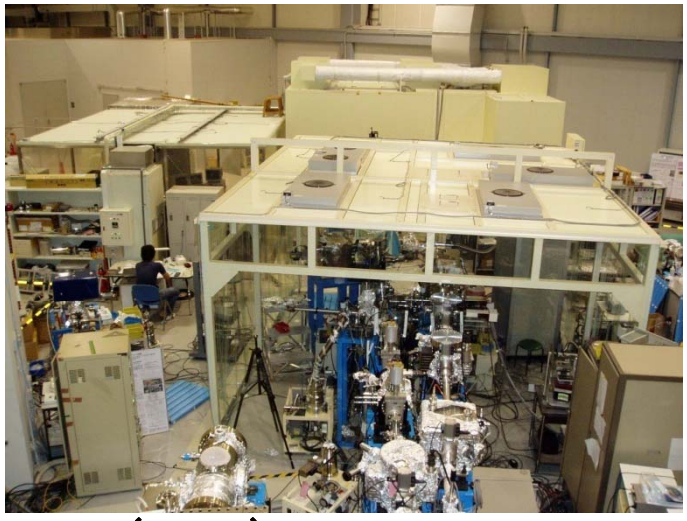
NewSUBARU Synchrotron Facilities

Reflectometer （BL10）

Interference Lithography &
New Resist evaluation system（BL9）



Total 9 Beamlines



EUVM & CSM （BL3）
EUV Mask Inspection

EUVL R&D at NewSUBARU

The market shares of the Japanese company supplying masks and resists for EUVL are high, such as 50% for the mask and 70% for the resists, respectively. Taking these shares into consideration

1) EUV-IL for the resist development of 16nm node and below
2) In-situ thickness measurement of the contamination due to the resist outgassing in the EUV intensity as same level in HVM
3) Multilayer reflectivity measurement utilizing reflectometer
4) EUV Mask inspection utilizing EUV microscope (EUVM)

   Observations of the absorber pattern and the phase defect in the mask blanks

5) EUV mask defect inspection in 22 nm node and below, and EUV mask absorber CD measurement utilizing the coherent EUV scatterometry microscope (CSM)