

e-Diagnostics *Implementation Roadmap*

Bill Ramus, IBM

wramus@us.ibm.com,

(802) 769-1229

March 23, 2001

INTERNATIONAL
SEMATECH

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Agenda

- **Assumptions**
- **Roadmap**
- **Next Steps**

Implementation Roadmap Background

Objective: Create a reasonable timeline for e-Diagnostic implementation that the semiconductor industry can use for planning

Methodology: Use capability taxonomy as timeline basis

Assumptions:

1. Capability levels and sub-levels are defined to be implemented in sequence, however this may not be necessary in all instances.
2. Capability levels do not need to be implemented across all tool types at the same time.
3. Priorities have been assigned to equipment types by the chip makers.
4. Chip makers must have infrastructure ready to accept e-Diagnostic solutions.
5. Parties to implementation must be prepared for intensive collaboration.

Cross references:

Capability taxonomy, data taxonomy, security guidelines, connectivity architecture must be in sync

Implementation Roadmap

Equipment Type:		Etch	Litho/Track	Implant	Diffusion	Metrology	Test	Wets	CMP	Assembly	Facilities	IC Infrastructure
Priority:		a	a	b	b	c	c	d	d			a
LEVEL 0:												
	Remote connectivity:											
	Tool connectivity to interim server	9/1/01	9/1/01	9/1/01	9/1/01	9/1/01	9/1/01	9/1/01	9/1/01			9/1/01
	Interim server	1/1/02	1/1/02	1/1/02	1/1/02	1/1/02	1/1/02	1/1/02	1/1/02			1/1/02
	Remote collaboration	1/1/02	1/1/02	1/1/02	1/1/02	1/1/02	1/1/02	1/1/02	1/1/02			1/1/02
LEVEL 1:												
	Remote Performance Monitor	1/1/02	1/1/02	1/1/02	1/1/02	1/1/02	1/1/02	1/1/02	1/1/02			1/1/02
	Data collection/storage	1/1/02	1/1/02	1/1/02	1/1/02	1/1/02	1/1/02	1/1/02	1/1/02			1/1/02
	Remote tool control	6/1/02	TBD	6/1/02	6/1/02	6/1/02	6/1/02	6/1/02	6/1/02			6/1/02
LEVEL 2:												
	Automated Reporting (std & ad hoc)	1/1/02	1/1/02	1/1/02	1/1/02	1/1/02	1/1/02	1/1/02	1/1/02			1/1/02
	Advance Analysis w/SPC Cap	4/1/02	4/1/02	4/1/02	4/1/02	4/1/02	4/1/02	4/1/02	4/1/02			4/1/02
LEVEL 3:												
	Predictive maintenance/self-diagnosis:											
	On-tool analysis	4/1/02	4/1/02	4/1/02	4/1/02	4/1/02	4/1/02	4/1/02	4/1/02			4/1/02
	Tool data/supplier analysis	7/1/02	7/1/02	7/1/02	7/1/02	7/1/02	7/1/02	7/1/02	7/1/02			7/1/02
	MES/tool data - supplier analysis	10/1/02	10/1/02	10/1/02	10/1/02	10/1/02	10/1/02	10/1/02	10/1/02			10/1/02
	Automated notification	6/1/02	6/1/02	6/1/02	6/1/02	6/1/02	6/1/02	6/1/02	6/1/02			6/1/02

Next Steps

- **Continue evaluating dates for balance of equipment types**
- **Final pass of dates/capabilities mapping to other documents**