

ITRS IRC/ITWG Meetings
HsinChu
December 4, 2006



UPDATED
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What's New for 2007?

- ▶ Timeframe advances two years 2007—2022
- ▶ Numbering for Tables, Figures, and Citations are self-consistent within each chapter.
 - ▶ Tables and Figures will use a prefix for each chapter, e.g., FEP tables will start at FEP1; Lithography tables will start at LITH1

Technology Requirements Guidelines:

- ▶ Yellow cannot exist in next 1 year (2007) 
 - ▶ Red cannot exist in next 3 years (2007, 2008, 2009**) 
- ** An ITWG can have an exception *approved through the IRC:*

“Solution NOT known, but does not prevent production manufacturing.”

New Cross-cut chapter of Emerging Research Materials



- Outline for ITWG chapters [*same as 2005 ITRS*]
 - Scope
 - Difficult Challenges
 - Technology Requirements
 - Potential Solutions
 - Cross TWG Issues
 - Inter-focus ITWG Discussions
 - Impact of Future Emerging Research Devices
 - References/Works Cited
- **File types:** Microsoft 2003 Office –
Word, Excel, Visio, Powerpoint



- ITWG chapters *2007 ITRS*
 - Focus Technologies (11)
 - System Drivers
 - Design
 - Test and Test Equipment
 - Process Integration, Devices, and Structures
 - RF and A/MS for Wireless Comms.
 - Emerging Research Devices
 - Front-end Processes
 - Lithography
 - Interconnect
 - Factory Integration
 - Assembly and Packaging
 - Cross-Cut Technologies (5)
 - Emerging Research Materials [*NEW for 2007!*]
 - ESH
 - Yield Enhancement
 - Metrology
 - Modeling and Simulation



2007 ITRS START Packets →

TABLE TEMPLATES

- An **EXCEL** provided with all **Technology Requirements** tables
 - Already annualized and formatted for 2007 years with correct timeline.
 - *Contains all that working groups current tables [2005/2006].*
 - *Distributed during Monday meetings and sent email on 12/05. Posted online Dec 11.*



2007 ITRS START Packets

TEXT TEMPLATES

- A **WORD** file provided to each TWG *AND* all are posted online.
- ▶ This file contains the **2005 ITWG chapter text**, any 2006 Update text and figures and text tables.
 - ▶ All text-based tables such as the **DIFFICULT CHALLENGES** tables are included in this WORD file.

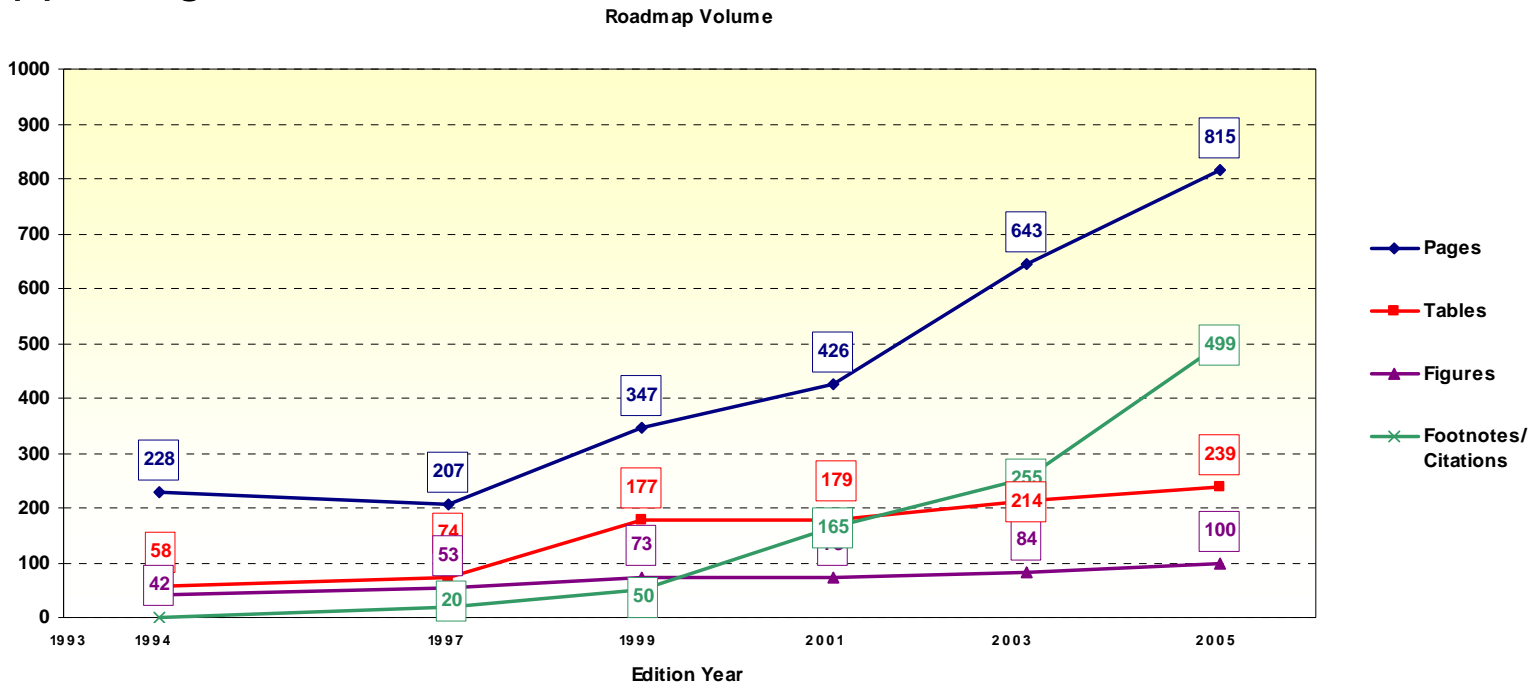
CHART TEMPLATES

- A **EXCEL** template provided for **Potential Solutions** figures. The ITRS team then redraws in Visio 2003.
 - *By request, we can send the Visio file of potential solutions used for 2005/2006.*



Page Allocations

- Because of the ***INCREASING ENTHUSIASM*** by ITWG authors to provide detail and supporting information, the ITRS has continued to grow in page count, the number of tables and figures, as well as citations and footnoted materials. Links to supporting electronic files are also on the increase.



Page Allocations

- There are now limitations on chapter size based on the 2005 ITRS. Each chapter will remain at the size of their 2005 chapter.



ITRS Year	Editable Page Count sheets					
	1994	1997	1999	2001	2003	2005
[1] Executive Summary	32	19	23	58	72	102
[2] System Drivers	na	na	11	22	24	25
[3] Design	19	20	23	31	41	53
[4] Test and Test Equipment	0	0	24	36	61	63
[5] Process Integration	24	16	21	47	40	55
[6] RF and AMS Wireless Techs	na	na	na	na	38	40
[7] Emerging Research Devices	na	na	na	na	50	74
[8] Front End Processes	28	23	37	44	61	66
[9] Lithography	16	17	19	17	19	29
[10] Interconnect	18	15	24	25	43	62
[11] Factory Integration	28	19	26	33	40	45
[12] Assembly and Packaging	14	18	27	21	24	50
[13] ESH	12	10	28	24	27	27
[14] Yield Enhancement	na	16	25	27	39	41
[15] Metrology	na	8	19	25	38	47
[16] Modeling and Simulation	na	10	16	16	26	36
Other sections	2					
Appendices	35	16	22			
ITRS Year	1994	1997	1999	2001	2003	2005
Totals	228	207	345	426	643	815

- There is no limit on electronic files that support these chapters.
Use these files for extra detail, white papers, models, etc.



- Dec 2006** ITWGs receive packets to begin full rewrite for 2007 chapter
- Jan – Apr** IRC teleconferences/TWG meetings are held to review/update tables
- ▶ **Apr 23 – 24** ITRS ITWG/IRC meeting in Annecy, France at the Imperial Palace Hotel
2007 draft tables are due and reviewed by ITWGs and CrossTWGs
 - ▶ **Apr 25** ITRS Public Conference at the Imperial Palace Hotel
- Jun 30** Presentation Drafts due for preparing the July meeting materials:
includes 1 page text summary of key changes to tables
- ▶ **Jul 16 – 17** ITRS ITWG/IRC meeting in San Francisco at the Hotel Marriott
2007 drafts are reviewed by ITWGs and CrossTWGs
 - ▶ **Jul 18** ITRS Public Conference at the Hotel Marriott
- July 20** **ALL FINAL tables due**
- Aug 31** **ALL FINAL chapter drafts [tables, figures, text] due**
- Sep 15** **2007 ITRS content is frozen**
[late material deferred to 2008 ITRS]
- Oct** Regional Executives Advisory board approve ITRS
- Nov 9** Presentation Drafts due for preparing for
December Public meeting materials
- ▶ **Dec 3-4** ITRS ITWG/IRC meetings TBD Hotel, near Tokyo, Japan
 - ▶ **Dec 5** ITRS Public Conference TBD Hotel, near Tokyo, Japan
- December** **2007 ITRS is posted online for the public**

2007 Edition – **SPRING** Schedule

- Dec 2006** ITWGs receive table files to begin full rewrite for 2007 chapter – CDs, email, online
- Jan – Apr** IRC teleconferences/TWG member meetings are held to review/update tables
- ▶ **Apr 23 – 24** ITRS ITWG/IRC meeting in Annecy, France at the Imperial Palace Hotel
- 2007 DRAFT TABLES ARE DUE to be reviewed by ITWGs and CrossTWGs***
- ▶ **Apr 25** ITRS Public Conference at the Imperial Palace Hotel



June 30

Presentation Drafts due for preparing the July meeting materials: includes 1 page text summary of key changes to tables

- ▶ **July 16 – 17 ITRS ITWG/IRC meeting in San Francisco at the Hotel Marriott**

2007 CHAPTER DRAFTS ARE DUE and reviewed by ITWGs and CrossTWGs

- ▶ **July 18 ITRS Public Conference at the Hotel Marriott**

July 20

ALL FINAL TABLES DUE



Aug 31 **ALL FINAL CHAPTER DRAFTS DUE
[TABLES, FIGURES, TEXT]**

SEP 15 **2007 ITRS CONTENT IS FROZEN ,
SUPPLEMENTAL FILES DUE**

[late chapter material deferred to 2008 ITRS]

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