

1999 ITRS Logistics

International Technology Roadmap for Semiconductors (ITRS)

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Issues / Actions - Policies

- **Ratify RCG Co-chair and responsibilities**
- **Review policy/roles for membership of all groups**
- **Set Calendar**
 - Dates, Locations for Announcements
 - Potential invitees lists for ITRS and Roadmap Workshop
- **Set quarterly meetings' schedule for RCG/TWG teleconferences**
 - March 22-26 before NTRS SRC and ITRS meeting in April
 - June 21-25 before ITRS meeting in July
 - August 16-20 before final approval
 - Sept 20-24 before freezing document



Issues / Actions - Document

- **Review proposal for 1999 ITRS publication media**
- **Review proposed 1999 page allocation**
 - 20 pages per FTWG, 15 pages per CCTWG
- **Review proposal for sections of 1999 ITRS**
 - Difficult Challenges, Technology Requirements, Potential Solutions tables and figures
 - Focus topics
- **Ratify Technology Generation / Node for tables and graphics**
- **Decide writers of TWG sections**
 - Which body (DTWG/ITWG) writes sections?
- **Identify RCG/IRC potential writers of 1999 ITRS Introduction Sections**

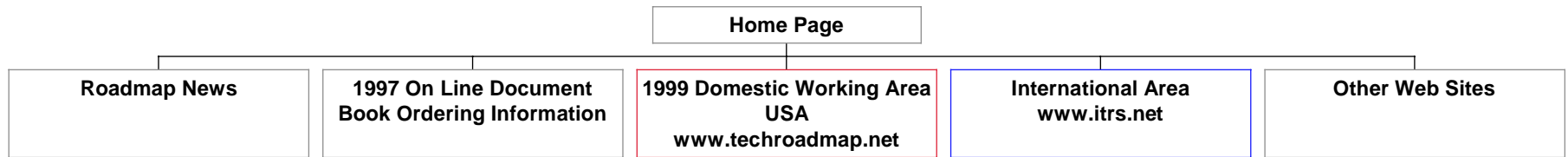


Calendar

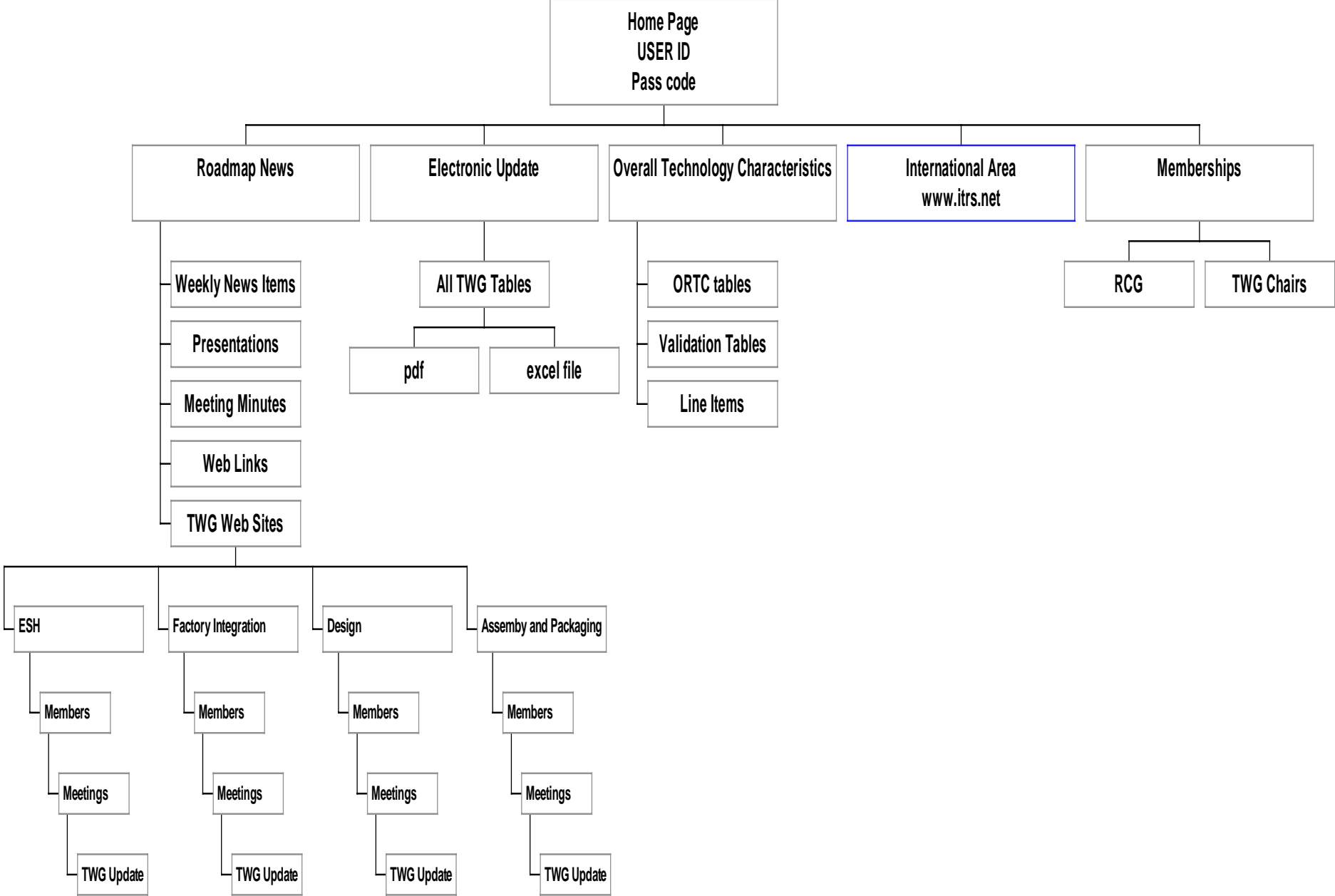
January 11	1998 final table update due for posting to web on secured sites
January 15	All 1998 tables posted to web sites
January 22	1999 ITRS format sent to TWG chairs and posted for downloading on web
Feb - Apr	Rewrite of 1999 ITRS sections by TWGs
April	SIA Approved 1998 tables posted publicly to world
April 12 - 15	ITRS meeting to review draft of sections with ITWG members (location/dates TBD, Munich is proposed) Manuscript draft 1 is then compiled
May - June	Update of all TWG sections compiled / presented at Int'l Roadmap Workshop
July 8 - 9	International Roadmap Workshop (location TBD, San Francisco proposed) Manuscript draft 2 is then compiled, includes Introduction sections by RCG/IRC
September	Content is approved and frozen
October	Document/CD is produced
November	ITRS is distributed
December	Roadmap presentations begin (SEMICON Japan, IEDM, other)



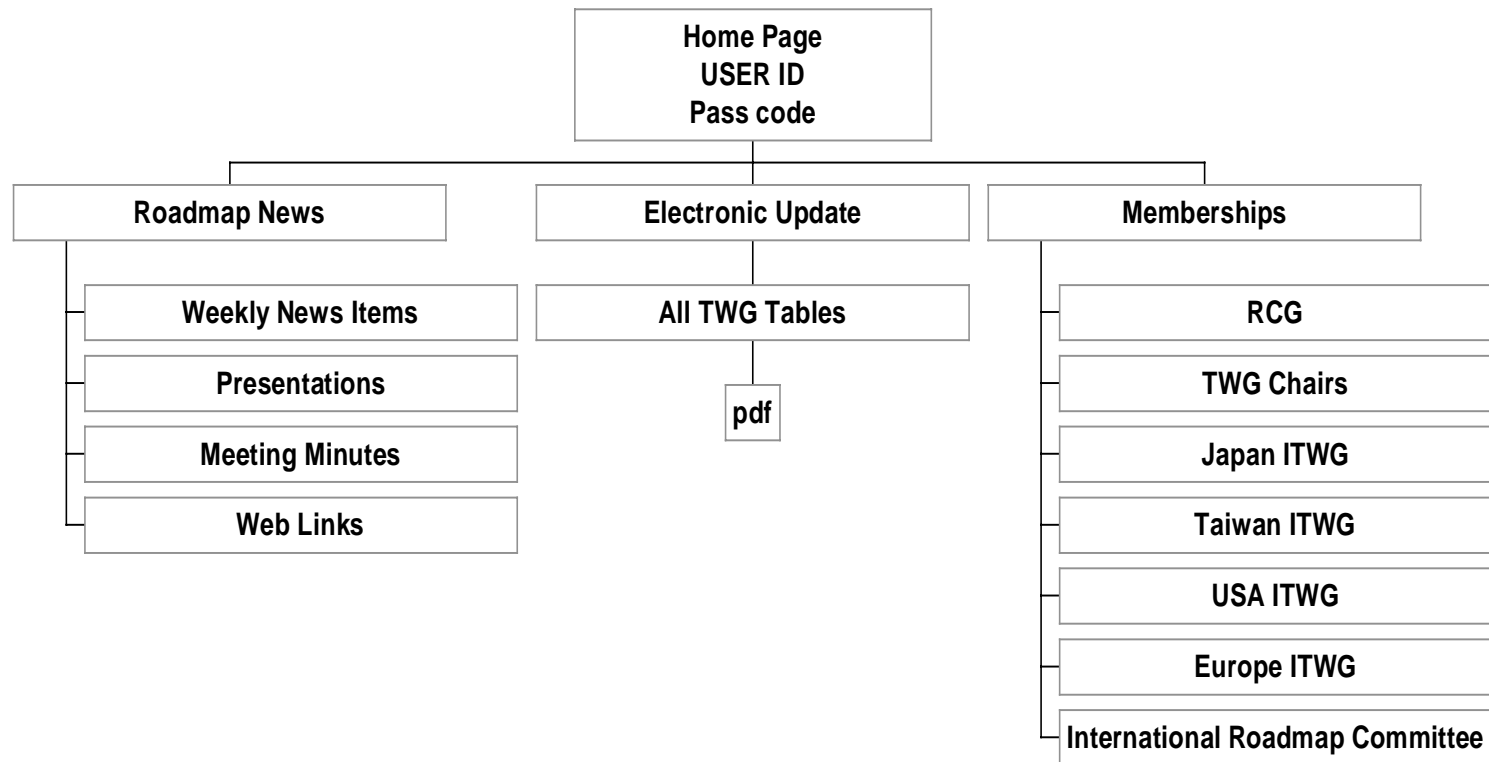
Web Structure - Public Site (Unsecured)



Web Structure - 1999 Domestic US Working Area

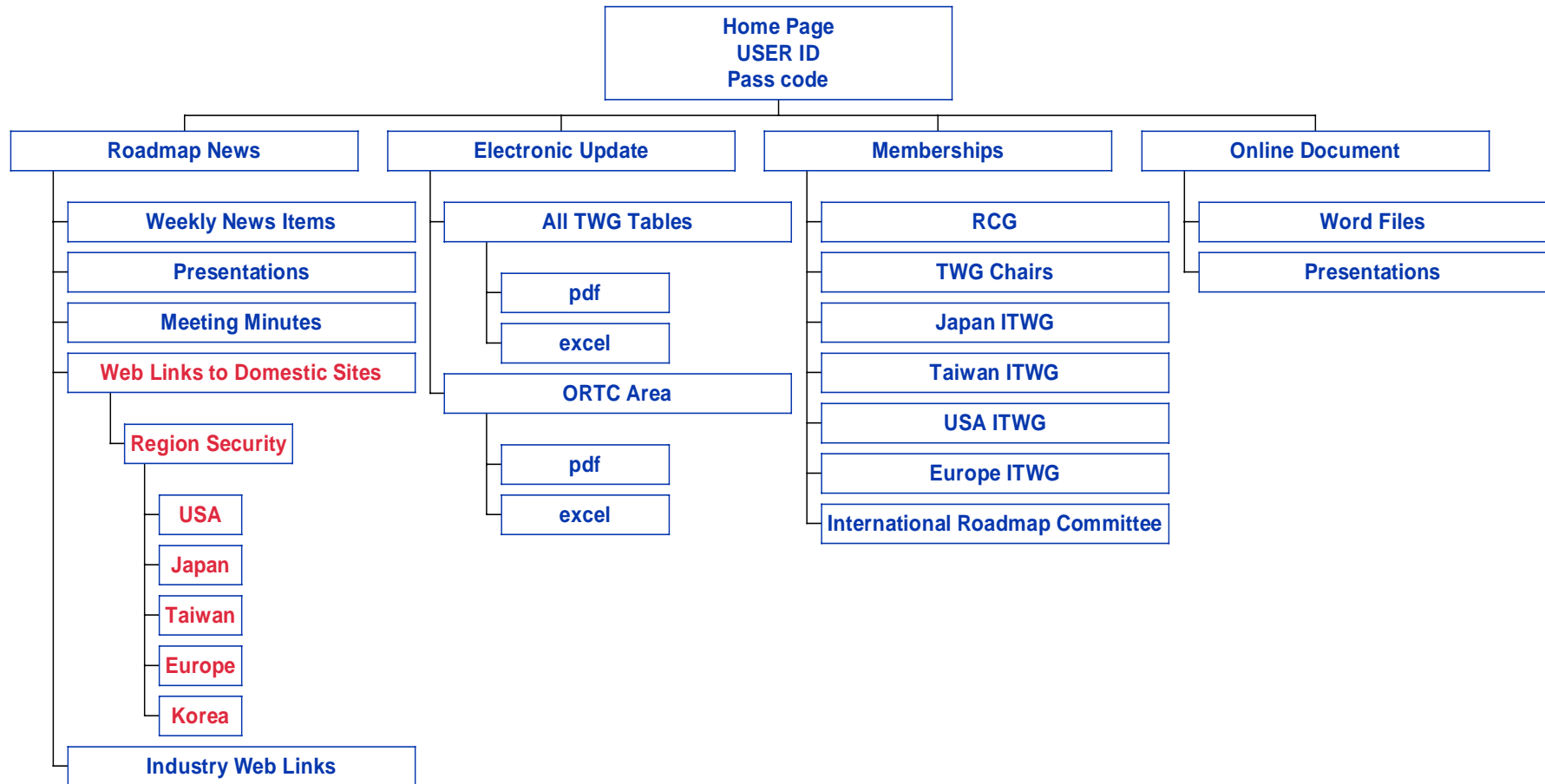


Web Structure - International Area



Web Structure - Proposed 1999 Structure

- ITRS will become dominant web site
 - No duplication of pages



1999 ITRS - What will it be?

- **Distribution of past Roadmaps**

- 1997 edition (12 months) ~11,900
- 1994 edition (36 months) ~12,350

- **Product Media**

- Online Web document
 - Secured versus going fully public at start
 - Interactive
 - Allowance for links to supplementary material

AND

- Document +200 pages all paper

OR

- Executive summary and CD-ROM



1999 ITRS - What will it look like?

- **Text is to be updated/re-written as required**
- **Format stays like the 1997 edition**
 - Fonts
 - Standard table structures,
 - Standard potential solutions figures
- **Focus topics are the same with some exceptions for update**
- **Propose freedom for additional graphics**
- **Propose additional page count**
- **Add Glossary**
- **Delete Index**



1999 Edition Format - Overview

- **January 22 - Sent to all TWG chairs and posted on web for downloading**
- **Document downloadable format file will be in Microsoft Word 6.**
 - Editor will compile document to this standard
- **Writers**
 - Use provided format and use Word 6 or 7
 - Tables can be constructed in Word 6 or Excel 4/5/7
 - Figures must be in Powerpoint 4, 5, or 7
- **All drafts will be posted per schedule on secured side only - ITRS site**
 - TWG sections' drafts written Jan - April; to be presented at ITRS meeting
 - Manuscript is created based on April ITRS meeting as Draft 1
 - Manuscript Draft 2 is created based on July Roadmap Workshop
 - Manuscript Final Draft for approval
 - 3 Drafts of compiled manuscript (entire document)



1999 Introduction Sections

- **Introduction**
 - International Considerations
 - Purpose/Objective of Semiconductor Technology Forecasting
- **Grand Challenges Update**
- **Overall Technology Characteristics**
- **Summary of Technology Sections**



1999 ITRS Sections

- **Scope**
- **Difficult Challenges**
 - Use Standard Table like 1997
 - *Near and Out-Year nodes / years need to be determined*
 - 5 Challenges $\geq 70\text{nm}$ / Before 2005 / $< 70\text{ nm}$ / Beyond 2005
- **Technology Requirements**
 - Use Standard Table like 1997
 - *Year of First Chip/Product Shipment/Technology Generation*
 - Allowance for figures
- **Potential Solutions**
 - Use Standard Figures like 1997
 - Allowance for other figures



1999 ITRS Back Matter

- **Appendix**
 - Contributors
 - Overall Technology Characteristic Tables
 - Definitions of ORTC drivers
 - Glossary of Acronyms and Terms



Page Allocation - 1997

<i>1997 NTRS</i>	<i>Page Contributor</i>					<i>Total Pages</i>
	Focus TWG	Met	ESH	Mod& Sim.	DRT	
Design and Test	16	1		1		18
PIDS	14	1	1	1	1	18
Front End Processes	14	1	1	1	1	18
Interconnect	14	1	1	1	1	18
Lithography	14	1	1	1	1	18
Assy and Packaging	14	1	1	1	1	18
Factory Integration	14	1	1	1	1	18
Metrology		7				7
ESH			7			7
TCAD				7		7
CFM					7	7
Introduction						19



Page Allocation - 1999 proposal

1999 ITRS	<i>Page Contributor</i>					<i>Total Pages</i>
	Focus TWG	Met	ESH	Mod& Sim.	DRT	
Design		<i>x</i>		<i>x</i>		20
Test		<i>x</i>	<i>x</i>	<i>x</i>	<i>x</i>	20
Process Int., Devices & Struc.		<i>x</i>	<i>x</i>	<i>x</i>	<i>x</i>	20
Front End Processes		<i>x</i>	<i>x</i>	<i>x</i>	<i>x</i>	20
Interconnect		<i>x</i>	<i>x</i>	<i>x</i>	<i>x</i>	20
Lithography		<i>x</i>	<i>x</i>	<i>x</i>	<i>x</i>	20
Assy and Packaging		<i>x</i>	<i>x</i>	<i>x</i>	<i>x</i>	20
Factory Integration		<i>x</i>	<i>x</i>	<i>x</i>	<i>x</i>	20
Metrology		15				15
ESH			15			15
Modeling & Simulation				15		15
Defect Reduction					15	15
Introduction	RCG/IRC					20
<i>Total Document</i>						240

