Linux vs. Windows

Software Engineering Perspective

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Introduction

- What distribution of Linux should be chosen?
- What version of Windows should be chosen to compare?
- What are the exact comparison factors should be used?

Linux Distributions

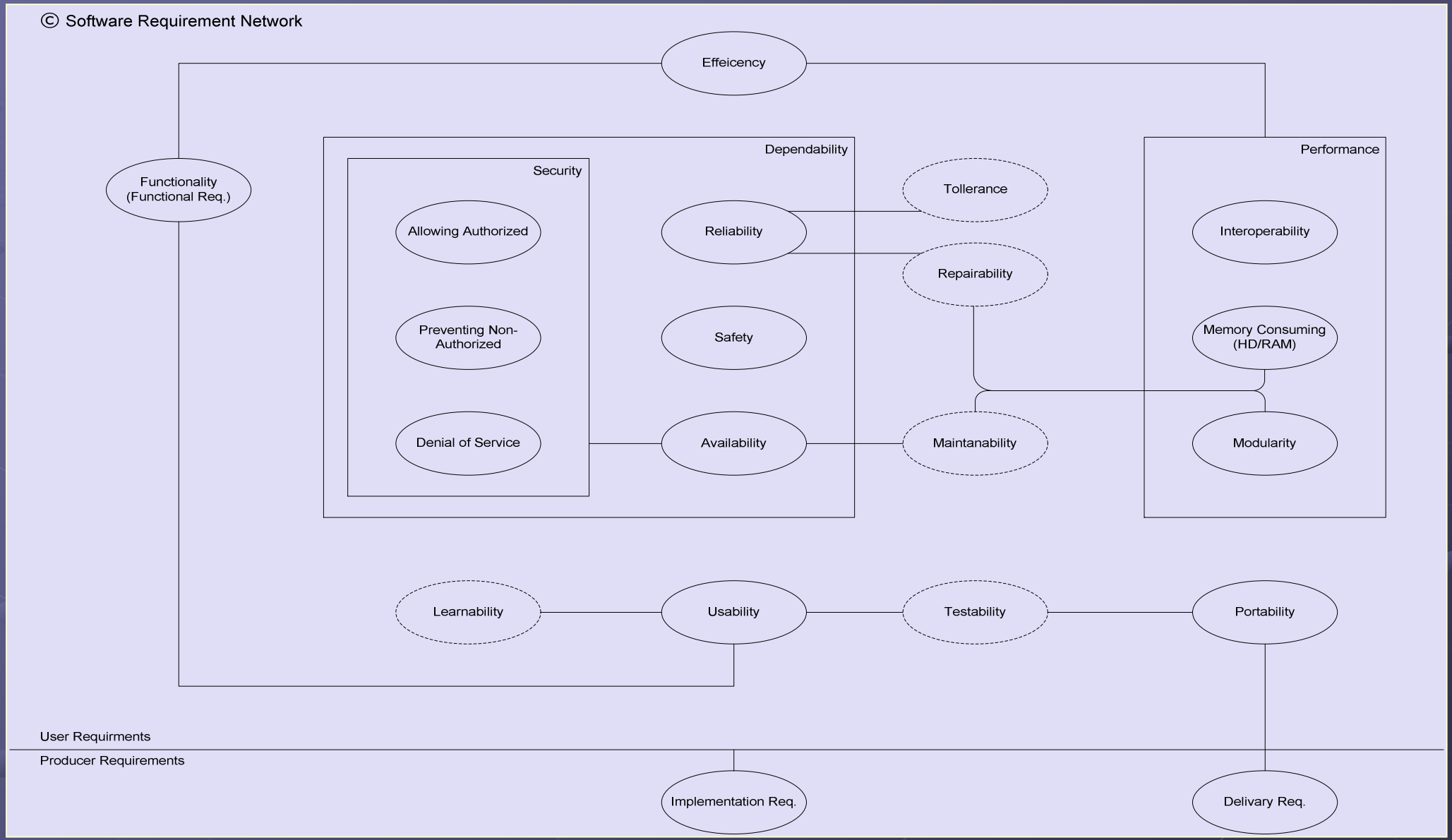
Desktop Environment

Root Distributions (The Package Manager)		GNOME	KDE
Debian	DEB	Debian - Ubuntu	Knoppix - MEPIS
Slackware	TGZ	Nonux - Topologilinux	Slackware - Slax
RedHat	RPM	RedHat	SUSE - Mandriva
Gentoo	SRC	Gentoo - Ututu	Kororaa

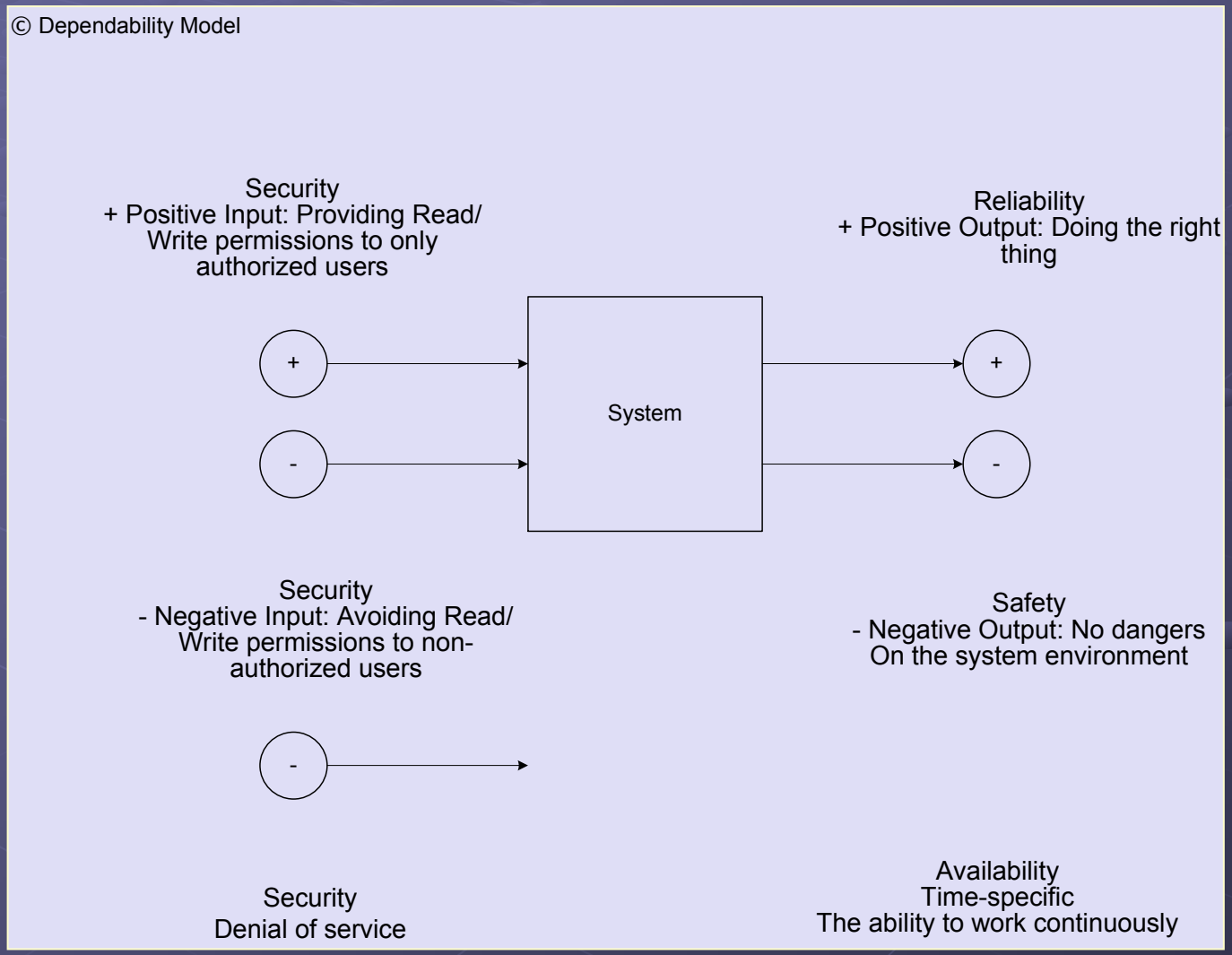
Windows Versions

Windows 9x	Windows NT
Windows 95	Windows NT 4.0
Windows 98	Windows NT 5.0
Windows 98 SE	Windows 2000
Windows ME	Windows XP
	Windows Vista

Software Requirement Network



Dependability Model



Software Requirements

Requirments		Windows	Ubuntu	Slax	Hints
Functionality					
	Drivers	2	2	2	Availabilty/Ease of installation
	Software	1	2	3	Productivity Software
	Protocols	3	1	1	IP6/SSH
Performance					
	Modularity	1	2	2	GUI
	Memory Consuming (HD/RAM)	3	2	1	
	Interoperability	2	3	3	OpenOffice
Dependability					
	Reliability	3	1	1	bug msgs
	Availability	3	1	1	hanging
	Security	3	1	1	Trojans (Privacy)
	Safety	3	1	1	Viruses
Usability		1	2	3	shell vs GUI - consistancy
Portability		3	2	1	LiveCD
Producer Requirments					
	Implementation	3	1	1	Deadline
	Delivary	3	1	1	Copyright

Conclusion

- According to the software Requirement Network, you can see that the relationship between requirements, including the relationship between user requirements and producer requirements, is very complex; each can affect one or more of the rest, tensing [1] or supporting. And since the nature of the producer plays the significant role in determining the implementation and delivery requirements, which –in turn- can affect the user requirements, we can conclude that the difference in the nature of producer between these two systems can occur a significant difference in the whole of user requirements.
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[1] Sommerville, I. (2007) Software Engineering, Eighth Edition, Addison-Wesley.

Conclusion

	Windows	Linux
Current status	For desktop users	For Server market
Should take care of:	Dependability (especially Security, reliability)	Usability Performance

References

- Sommerville, I. (2007) Software Engineering, Eighth Edition, Addison-Wesley.
- DistroWatch: http://distrowatch.com/dwres.php?resource=major

Thanks for Listening!