From: Joe Belfiore
Sent: Friday, May 29, 1998 2:59 PM
To: Yusuf Mehdi; Brent Ethington
Subject: Thoughts on Neptune segmentation

fyi...

FW: NT entry versus NT standar...   mgmtconf.ppt (81 KB)

From: Eugene Ho
Sent: Tuesday, April 28, 1998 4:45 PM
To: Joe Belfiore; Deborah Black
Subject: FW: NT entry versus NT standard

FYI . This is the mail...

-----Original Message-----
From: **Moshe Dunie**
Sent: Sunday, March 15, 1998 12:19 PM
To: Moshe Dunie's Direct Reports
Subject: FW: NT entry versus NT standard

-----Original Message-----
From: Bill Gates
Sent: Saturday, March 14, 1998 8:11 PM
To: Paul Maritz, Jim Allchin (Exchange)
Cc: Brad Chase, Steve Ballmer; Joachim Kempin; Eric Rudder
Subject: NT entry versus NT standard

This is not a key issue until at least May 99 but here are some thoughts I have after thinking and listening at the management retreat. I think it is very cool to have a lot less in Entry.

We need to have a $79-99 sku which upgrades entry to standard. It has to have enough things that no single feature is that attractive for some else to add back in.

Entry should drop:

a. A massive number of utilities which just confuse people
b. Weird backwards compatibility. The ONLY stackshould be TCP/IP and no flexibility for more. No DOS box. No old device drivers.
c. Less features. No file server capability. No web server. No ISDN.
d. Several things related to speed like less paging and caching intelligence. We need to be able to describe these so there is SOMETHING that is 2x faster in Standard even though most things are only 5% slower
e. A simple control panel
f. It should include some things that are home related and businesses DONT want like games. We can have these free on the net for standard users who want them and let OEMs include them with standard if they choose to.
g. Less MANAGEMENT tools. You might say what about WINtone and great remote management for these users. The answer is that these technologies should come from the service partner so it is GREAT for us to not have them in entry because it give the service partner for Wintone another reason to work with Microsoft. The client side components will automatically get sent to you by the service provider if you are an entry user. So Intellimirror client is not in Entry.
h. Less security support although this is tricky.

Making more money through PC growth and OS Price

- How do we increase demand for computers?
- How do we increase per PC revenue?
  - How do we accelerate move to Windows NT?
  - How do we differentiate between Standard and Entry level versions of Windows NT?
- How do we avoid confusion with Windows CE?

Desktop Platform "Base Case"

OEM

- PC Shipment growth slows to 13.2% CAGR
- OEM Win9x royalty $/unit drops to $47 in FY00 and to $42 in FY01 from low-price PC
- OEM NTW mix increases to 29% of total shipments (approx 40% of business by FY01)
- Continued improvement in OEM piracy is achieved (14% to 10% unlicensed in FY01)

Summary of Base Case Units

Licenses 000's

	% Total Units					
	FY96	FY97	FY98	FY99	FY00	FY01
OEM						
Win16, DOS & Other	56%	18%	4%	1%	0%	0%
Windows 9x	44%	76%	86%	81%	60%	7%
NT-Entry Level	0%	0%	0%	0%	17%	64%
NTW, NT-Standard	1%	3%	10%	17%	23%	29%
Unix Add-On	0%	0%	0%	0%	0%	0%
Total OEM	100%	100%	100%	100%	100%	100%
FG						
Win16, DOS & Other	22%	13%	6%	3%	1%	0%
Windows 9x	40%	38%	39%	37%	24%	6%
NT-Entry Level	0%	0%	0%	0%	8%	23%
NTW, NT-Standard	6%	18%	23%	23%	27%	29%
Unix Add-On	0%	0%	0%	0%	1%	0%
Add ons	13%	6%	3%	5%	3%	2%
Maintenance	19%	22%	16%	10%	6%	4%
Enterprise Agreements	0%	2%	12%	22%	31%	37%
Total FG	100%	100%	100%	100%	100%	100%
Total Desktop OS						

- Shift in unit volume from Win9x to NTW
- NTW segmented into “Entry” ($50) and “Standard” ($100) products
- OEM Unit growth expected to slow during FY00 & FY01
- FG units surge in FY99 from Win98 & NTW5 launches, EA

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Major Levers for Growth

Key Assumption	FY01 Assumption for Scenario: Base	Stretch	Low Growth
PC Shipment Growth	13.2%	13.2%	10.3%
OEM NT-Entry Rev $/PC	$42	$52	$42
OEM NT-Standard Mix %	29%	50%	20%
EA LORG Penetration	31%	40%	31%
FG NTW Mix (Business)	59%	90%	40%
FY01 Revenue	$7 9B	$9 7B	$6.9B
Change from Base Case		+$1.8B	($1.0B)

+/- Sensitivity	FY01 Impact
1%	$150M
$1.00	$75M
1%	$50M
1%	$10M
1%	$3M

The Keys To Beating The Base Case

- Increase per-PC Revenue
  - Move OEM shipments to NT even more aggressively
  - Create NTW product segmentation
    - Can't sustain a single $100 product price point as PC prices decline
    - Must have a $50 product to replace Win9x
  - Executing on WinUpdate to:
    - Mitigate threat of downward price pressure
    - New source of revenue (annuity)
- Broaden PC Market
  - Increase relevancy of PC for non-PC users
  - Reduce PC costs
  - Attack markets and segments where we are under-investing
    - WW Education and Home segments starting with Japan & Europe

Accelerating The Move To NT

What prevents this today?

- Lack of device drivers
- Application compatibility
- Cost of migration
- Additional RAM requirements
- Win98 fills most needs
  - Continuing to evolve Win98 post RTM will delay migration to NTW

Creating NTW Segmentation: Challenges & Risks

- Must maximize sales of higher priced SKU without inhibiting PC market growth
- API/DDIs must be identical in both products
- Feature differentiation must be rational & based on customer segments -- easy to describe to users & OEMs
- Must minimize competitive threat
  - 3rd parties will bridge gap between segments
  - 3rd parties may further Win9x independent of MSFT

Potential Ways Of Segmenting

- Home vs. Small Business vs. Enterprise
- No access to IT Pro vs Access to IT Pro/Dept.
- Beginner vs. Standard User vs. Engineering User
- Hardware capabilities

PC Tier Segmentation

- All API, DDI, current driver support identical
- Standard compelling to most customers
- Entry-Level is a sub-set of Standard, differentiate on
  - Capacity
  - Features Compromises flexibility and richness for simplicity (e g reduce menu options), no corporate deployment, administration infrastructure and tools
  - Connectivity limited to internet connection
  - Compatibility. focus on newer applications to reduce complexity
- OEM Pricing:
  - Standard ~$100; Entry-Level ~$50\

			Entry-Level	Standard	Turbo
Capacity	Memory	RAM	64 MB	Architectual	Architectual
	Processors	Architectures	x86	x86/alpha	x86/alpha
		MP Support	No	2	>2
	Devices	Hard Drives	internal & 1 removabl	Multiple	Multiple
		CD-Rom/DVD	1	Multiple	Multiple
		Multi-Monitor	No	Yes	Yes
Features	Manageability	Corporate deployment tools	No	Yes	Yes
		Corporate management tools	No	Yes	Yes
		Resilience (e.g. UPS)	No	Yes	Yes
		Chkdsk/Scandisk	Yes	Yes	Yes
		Defrag	No	Yes	Yes
		Perfmon	No	Yes	Yes
		Chrome	No	Yes	Yes
		Remote Control(using Hydra)	No	Yes	Yes
		MobileSupport	Limited	Extensive	Yes
		Peer Services (SMB, HTTP)	No	Yes	Yes
	App. Bundles	Mail Client	Outlook Express	Outlook Pro	Outlook Pro
	Language	Multilingual UI support	No	Yes	Yes
		UNIX Services	No	No	Yes
Connectivity	DSYS Client Support	Domain support	No	Yes	Yes
		PK security	Yes	Yes	Yes
		NTLM, Keberos Security	No	Yes	Yes
	Net Protocols	TCP/IP, DHCP, PPP	Yes	Yes	Yes
		IPX/SPX, NetBEUI, DLC, App	No	Yes	Yes
		VPN (PPTP, L2TP, IPSEC)	No	Yes	Yes
		NAT (Shared Internet Access)	No	Yes	Yes
		Netware Client	No	Yes	Yes
Compatibility	Subsystems	Win32, Win16	Yes	Yes	Yes
		DOS, OS/2, POSIX	No	Yes	Yes
	File systems	NTFS	No User Security	User Security	Yes
		FAT	Yes	Yes	Yes

Testing this segmentation

- OEMs:
  - What's the price of the PC?
  - What's your target customer?
- Corporate IT:
  - Are manageability, security critical to you?
  - Is ease of migration important?
- End-Users:
  - Is this your first PC?
  - Are you on a network maintained by corporate IT / an IT professional?
  - How much do you want to spend?

WinCE positioning

- Need to keep the delineation clear
- WindowsCE is for task & locale specific market
  - Game Machine
  - SetTop Box
  - Small portable devices
  - Embedded opportunities (NT for some oppty's)
  - "Appliance PC"
    - few options
    - Very little peripheral support

WindowsCE Portable vs. the EntryPC laptop

- An appliance
- IMAP4/HM mail client
- IE4 class browser
- Integrated limited app
- $799-$899 portable
- 10 hours on batteries
- Disk for data only
- PC companion

- Office Standard
- IE4 browser
- Full peripheral support
- backward compatibility with Win95
- ~$1200
- IP fax/phone/comm

Increasing The Relevancy Of PCs

- Services
  - Easier "Get Connected"
  - Free Email
  - Free HomePage
  - Personalized Windows Update
- Still & Video Imaging
  - Manipulation/Storage/Retrieval architecture & applet
- Net/Comm
  - Shared Internet Access
  - IP Fax
  - Home Networking
  - SW modem support
  - Voicemail
  - Remote control
  - Shared Internet Access
- Supportability/Self-Diagnosing

*With an eye toward end-user excitement

- Personalization
  - User profiles for parent/administrator/child
  - Defined user state that can exist server, locally
- New Shell
  - Adaptive based on user interaction
  - Natural language querying
  - Voice
- New & Improved Gaming
  - No install
  - Multi-player
- Richer synchronization services
  - offline, slow link, fast link for PIM, documents, user state

Post-Sale Revenue Opportunity

- Windows Update ($XX/yr)
    - Service PC w/ SW updates (service packs, drivers, cool add-ons)
    - Improved safety net (eg. 1 free Internet support incident)
    - Valued customer relationship
        - Regular and personalized communications from MS
- Windows Update "Platinum"
    - All of the above
    - Recommendations for additional apps
    - Discount or points on purchase of MS products in 12 mos. window

Home/Consumer upside

1997

Region	Edu. installed	# Schools	PCs/School	Home Installed	Home Entities	Home %
Western Europe	3,470,643	267,952	13	31,256,219	143,234,064	22%
Eastern Europe	499,890	52,881	9	2,220,374	78,503,761	3%
North America	7,711,213	131,676	59	51,828,824	108,127,301	48%
South America	1,003,527	604,166	2	4,165,569	87,192,506	5%
Japan	1,311,566	64,568	20	7,382,002	42,130,900	18%
SE Asia	644,848	160,909	4	934723	32,459,075	3%
Asia+India	2,806,920	193,765	14	3965882	441,655,727	1%
AMME	536,425	154,864	3	1236650	47,011,940	3%
Total	17,985,032	1,630,802	11	102,990,243	980,315,274	11%

- PC/Server penetration into European SMORG's similar to U.S.
- Yet penetration into homes is less than half
- Penetration into homes seems to be correlated with penetration in education
- Upside potential in Europe and Japan alone is $865,000,000

Recommendation:

- Help improve efficiency of consumer channels in these markets
- Shift EDCU focus from U.S. to Europe/Japan
- Awareness campaign focused on utility of PC in the home and education

Bottom Line

- NTW Segmentation:
  - Successfully protects $100 revenue for business desktops and differentiate w/ WinCE
  - Doesn't provide strong enough motivation for consumers to purchase $100 product.
- Product:
  - Minimize Web Postings & Win9x Offerings
  - Deliver "Big Bang" NT6 release