From: Leland Rockoff (Exchange)
Sent: Tuesday, February 16, 1999 11:04 AM
To: Craig Fiebig (Exchange); Joseph Krawczak (Exchange); John Vail (Exchange)
Subject: update on office growth project

50419-00-11Feb99-A
W-sp-SFO1 pp

here is the deck that we will discuss on thursday morning. if you have a few spare moments prior to our meeting, browse through it. We will only have about 45 minutes to chat on Thursday, so it would be valuable to draw-out any questions or issues in advance. Thx

Plaintiff's Exhibit
8163
Comes V. Microsoft

UNDERSTANDING HOW LORGS BUY SOFTWARE

Progress Update

February 11, 1999

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OVERVIEW: UNDERSTANDING DAD GROWTH

We're in the process of conducting a series of research projects and analyses to better explain why Office growth exceeds what can be explained by PC growth and version upgrades into the installed base

- Detailed analyses of mature subs: Sweden and Switzerland
- A series of quantitative studies to gauge Office deployment, the remaining potential for incremental deployment and customer satisfaction
  - deployment call-down, Media Metrix, SCI survey
- Dr. Les Shipman – forecasting and data-mining guru
- U.S. LORG study with BCG

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MICROSOFT/BCG U.S. LORG STUDY
Focus and Objectives of the Research

Main focus and objectives

LORG customer interviews
- Quantify key purchase behavior drivers
  - mechanisms by which purchases and errors occur
- Identify key differences between 24 month purchase expectations in 1996 and what "actually happened"
- Purchase behavior case studies in several groups within LORGs
  - current "state" of the desktop
  - follow historic PC and software flows

OEM and channel interviews
- Contrast external versus internal views
- Quantify recent dynamic effects

Dynamic behavioral modeling
- Based on purchase drivers consistent across all available data
- Leading to scenarios to explain past, inform future

Not focus or objectives

Statistically significant "audit" of purchases of PCs and software
- Micro quantification of every possible behavior
  - focus rather on meaningful behavior "categories"
- "80/20" rule

A straight extrapolation of the past into the future
- EAs and other changes will dominate
- Better to understand purchase drivers and relationships

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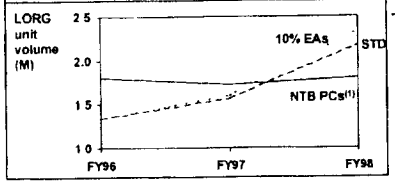
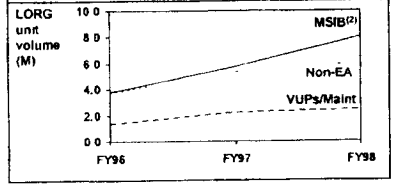
MICROSOFT LORG LICENSE SALES ARE GROWING FASTER THAN EXPECTED

Growth in sales of STD licenses versus new to base PCs



CAGR: 22% (STD); 0.2% (NTB PCs)

Sales of upgrades versus Microsoft installed base



CAGR: 48% (MSIB); 27% (Non-EA); 32% (VUPs/Maint)

PC software and hardware shipments seem misaligned

Standard license sales
- Higher than growth in PCIB
- Growing faster than "acceleration" of PCIB
  - 22% versus 0%

Upgrade license sales
- VUPs/Maintenance have demonstrated a healthy growth rate over 3 years
- Insight into upgrade behavior mechanisms will provide a better understanding of the growth in sales of upgrade licenses

Maintenance and EAs lead to measurement problems

Underlying LORG employee base is growing at only 1-2%

(1) Curtis Freet assumption
(2) Installed base implied if all STD licenses were incremental to the base 10% EAs incremental 2M CUPs over three years
(3) Upgrade rate on non-EA MSIB

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THE TEAM HAS MODELED SEVERAL DRIVERS OF PAST LICENSE GROWTH

Drivers of Past Purchases Have Varying Implications for Future Growth

	Standards	Upgrades
"Overbuying" behavior • Purchases will decrease as cost of tracking errors falls below cost of overbuying, or as license terms remove some of these errors	Errors • Standard for VUP, CUP • Standard for replacement Intracompany churn • Standard for transfer	Error rate • Downgrade rights
Penetration • Will eventually decrease as available pools are saturated	Incremental penetration of LORG employees Incremental penetration of MS office • LOB switching Concurrency/piracy/competitive eliminations	CUPs
Steady state behavior • Will continue to generate license sales	Growth in LORG employees Intercompany churn MS run rate	Upgrade rate Installed base (PC and MS) Installed base growth

These behaviors have been modeled to capture their relative effects

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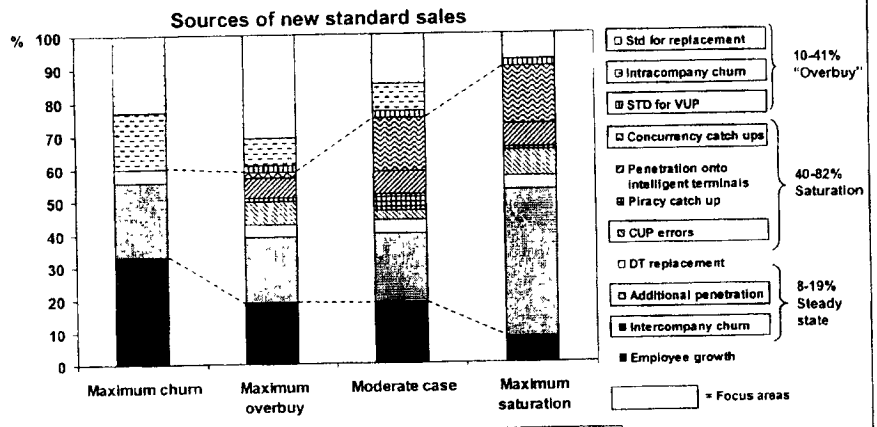
SEVERAL MODELED SCENARIOS EXPLAIN HISTORIC SALES

New Standard Licenses Shown



Research will refine the key variables behind drivers of past growth

Source Team analysis

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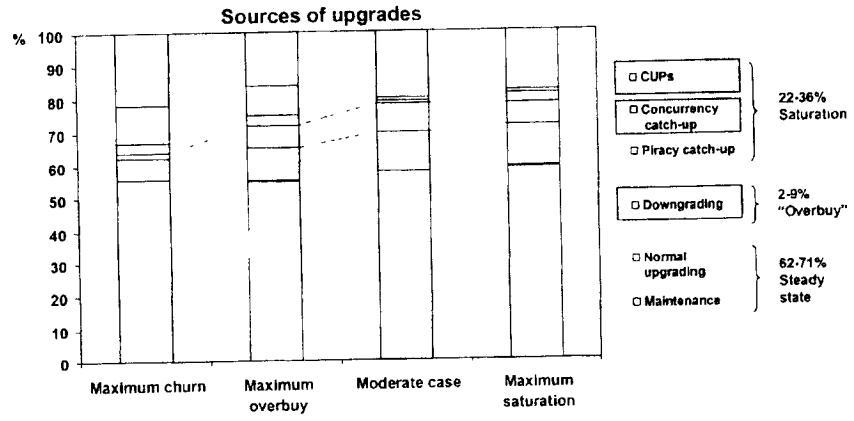
SCENARIOS EXPLAINING STANDARD SALES HAVE IMPLICATIONS FOR PAST SOURCES OF UPGRADE SALES



Source Team analysis

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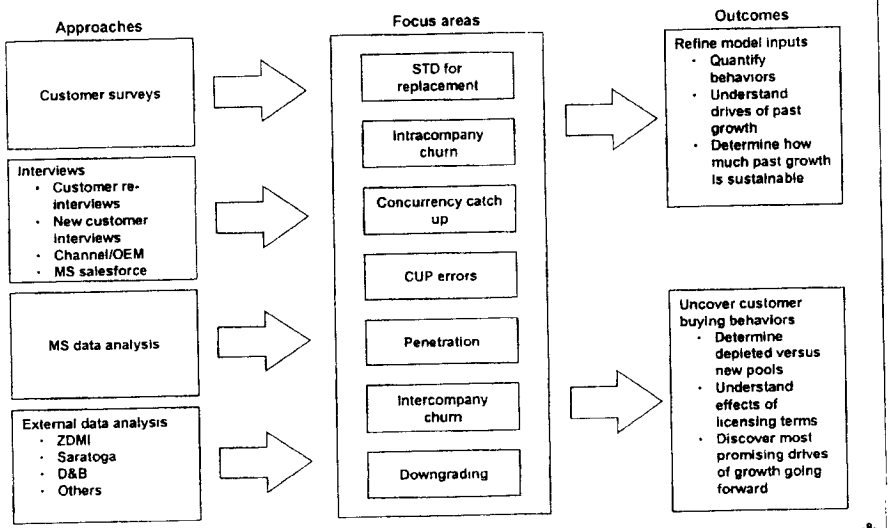
RESEARCH ACTIVITIES WILL REFINE THE MODEL AND PROVIDE A FRAMEWORK FOR FUTURE GROWTH



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INTERVIEWS WILL QUANTIFY KEY MODEL VARIABLES (I)

Standard Licenses

Drivers	Sample questions[1]	Key variables refined
STD for replacement	• What is the average life of a PC in your organization? • Are licenses transferred for replacement PCs? • If new licenses are purchased, which version is purchased? Most current or corporate standard?	• Replacement rate • STD on replacement error
Intracompany churn	• When people are hired in for existing, but vacated positions, do they get a new PC, re-deployed PC, PC in storage? • For these PCs, where do software licenses usually come from?	• Number of PCs/STD licenses due to intracompany churn
Concurrency catch-ups	• Do you use concurrency? Have you ever used concurrency? • Have you reduced concurrency since 1995? • What kind of licenses did you purchase to eliminate concurrency?	• Rate of concurrency catch-up • Percent of STDs/EAs/VUPs from concurrency catch-up
CUP errors	• For 1995-98, how many of your PCs have been running non-MS brands of business productivity software? • When you purchased new licenses for those PCs, what kind of licenses do you buy?	• Rate of competitive switching • Percent of switching attributed to CUPs versus STDs
Additional penetration	• Are people are getting PCs who didn't have them before? Who? • When these PCs are new, what is the process for getting the appropriate software licenses?	• Percent of STD license sales due to true new PCs
Intercompany churn	• When people are hired in for newly created positions, do they get a new PC, re-deployed PC or a PC in storage? • For these PCs, where do software licenses usually company from?	• Percent of intercompany churn • PCs that get STD licenses

Quantification of variables will bound major drivers

(1) Questions are excerpts from larger questionnaire (see attached)

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INTERVIEWS WILL QUANTIFY KEY MODEL VARIABLES (II)
Upgrades

Drivers[1]	Sample questions[2]	Key variables refined
CUPs	· For 1995-98, how many of your PCs did you change from another brand to the corporate standard?	· Rate of competitor switching
Normal upgrading	· What drives your upgrade purchases? Is it changing? · Describe your last major upgrade	· Rate of upgrading on non-current base
Downgrading behavior	· Under what circumstances have you deployed non-current versions of Office? How many licenses, for how long? · When did you upgrade to the current version (in relation to your current license agreement)? How did you determine the number of VUPs to buy?	· Rate of VUPs from downgrades
Maintenance	· Do you operate under a maintenance agreement? · When you bought maintenance, what kind of licenses did you have covered? · Why did you opt for the maintenance agreement?	· Percent of maintenance on current versus non-current licenses

(1) Some upgrade data is captured by questions on previous page
(2) Questions are excerpts from larger questionnaire (see attached)

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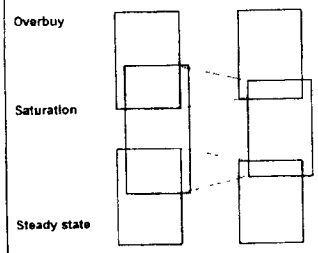
RESEARCH WILL PROVIDE BOUNDS FOR QUANTIFICATION AND ALSO UNCOVER UNDERLYING PURCHASE BEHAVIORS

Ongoing research will also continually improve understanding

Present effort

Narrow range of uncertainty in purchase drivers



Customer interviews will put reasonable bounds on the magnitude of purchase drivers

Ongoing market intelligence

Framework for future research

Preliminary results from deep dives will provide a framework for further market intelligence research

- Ongoing MS site visits will allow initial results to be tested with a larger sample
- Salesforce intelligence can be used to test results more broadly
- Quantitative surveys can be used to quantify clearly identified behaviors

Understanding behavior mechanisms

Beyond quantification, deep dives will provide insight into how/why licenses are purchased to help understand future purchase drivers

- Do license purchases track new PCs or new employees?
- EA effects
  - what drives EA purchases?
  - how do customers think about upgrades?
- What drives purchases of Upgrades and Maintenance?

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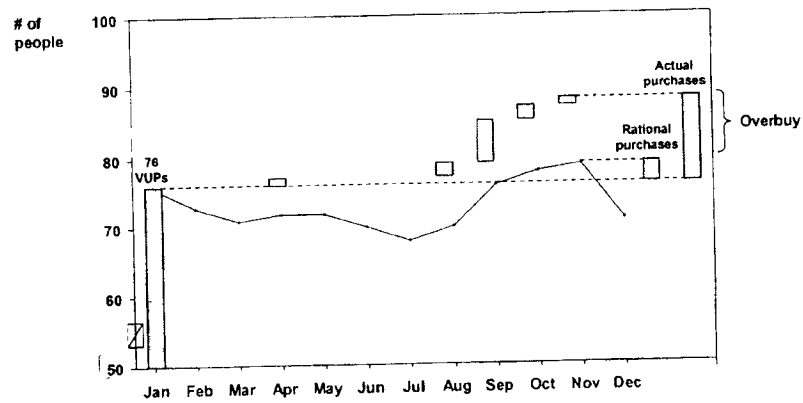
DEEP DIVE EXAMPLE OF HOW CHURNING HEADCOUNT DRIVES UNNECESSARY LICENSE PURCHASES

BCG SF



Change headcount = 3
Rational purchases = 3 STDs } 300% overbuy
Actual purchases = 12 STDs } 10% of lbase

Source BCG interviews

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DEEP DIVE PROVIDES ADDITIONAL INSIGHT INTO HOW LICENSES ARE TRACKED

Should We Attribute License Purchases to PCs Or to Employees?

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
People Δ	–	-3	-2	+1	0	-2	-2	+2	+6	+2	+1	-1
Total	76	73	71	72	72	70	68	70	76	78	79	78
PC												
• Deployed	80	77	75	76	76	74	72	74	80	82	83	82
• Spare	66[1]	69[1]	6	5	5	7	12	13	8	6	5	6
- In "closet"												
- In for repair												
• Purchases	–	–	–	–	–	–	3	3	1	–	–	–
Licenses purchased												
• STD	–	–	–	1	–	–	–	2	6	2	1	–
• VUP	76	–	–	–	–	–	–	–	–	–	–	–
Overbuying	–	–	–	1	–	–	–	2	6	–	–	–

(1) Sixty-five Macs sold in March

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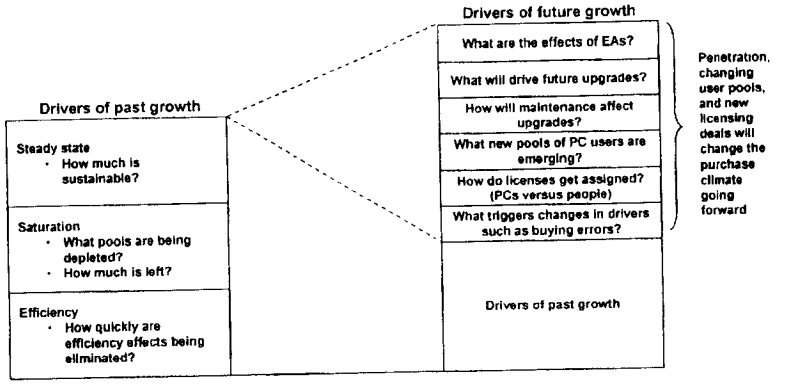
BROADER IMPLICATIONS OF THE RESEARCH

Explaining Past Growth Is Only the First Step Toward Understanding Future Growth



Research activities will go beyond explaining past growth to understand drivers of future growth

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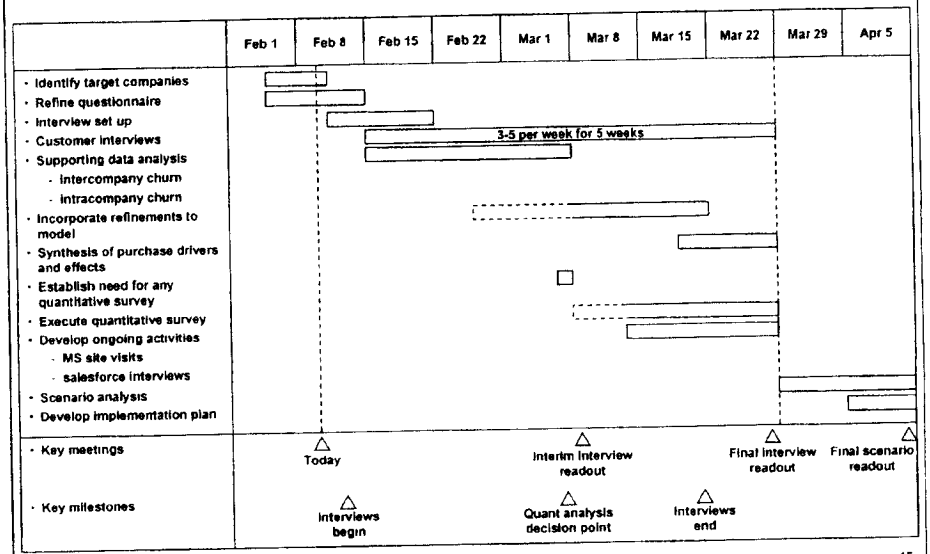
OVERVIEW OF RESEARCH ACTIVITIES



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WHAT'S DIFFERENT ABOUT THIS EFFORT?

Talk to multiple levels of organization in LORGs (left-hand/right-hand)

Customer/channel/OEM interviews uncover subtle disconnects in PC/software management

- Don't assume that customers are aware of their behavior
- Don't assume that behavior is efficient

Comprehensive, interlocked PC and software purchase models

- must tie together
- links purchase behaviors to observed facts

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