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Microsoft Memo

File → 4 OEM Sales in the 90's

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From: Joachim Kempin
Date: February 9, 1990
Subject: OEM Sales in the 90's
Cc: Bill Gates, Jon Shirley, Richard Fade, Ron Hosogi, Bob O'Rear

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Executive Summary

OEM Sales in the 90's will continue to primarily license system software products to PC manufacturers. The definition of what a PC might be will change. Calculators will be replaced with Poquet PCs, RISC machines will replace mini and mainframes, and any CPU which will run our system software could potentially be targeted (printers, imbedded systems etc.).

The strategic sales goals will remain the same:

- Develop strategic OEM relationships to enable us to understand the market trends and help our customers be successful
- License as many machines as we can
- Get as much royalty per system as the market can bear.

Maximizing market penetration and royalties, and being a key strategic partner for the paying customers means an ongoing balancing act for OEM Sales.

The business challenge will be to increase earned system royalties per system from $19.7 in FY89 to well over $30 in FY94. At the same time, we will have to penetrate the "non-licensed" PC segment. We expect this segment to grow nearly twice as fast as the overall market. (This document does not comment on any IBM strategy - a key royalty opportunity for the 90's.) We are convinced that the only way to increase our royalties per system is a more centralized sales organization, whereby OEM manpower for smaller countries should be focused in the European HQ, Redmond or later in the decade in an FE HQ. This will improve service for the customers and enable us to achieve OEM objectives in a more predictable way.

In the past, we never invested in OEM (channel) marketing. It will be mandatory in the future to invest manpower in understanding the market dynamics and to translate the findings into better products as well as relevant training for the OEM sales force. In order to enable the OEM account manager to be a true business consultant to the OEMs, we will continue to invest in their education which should yield in great OEM relationships despite our aggressive revenue and penetration goals. OEM's measure their success in the number of PC units they sell. I am therefore proposing to invest in building an improved OEM marketing organization to help OEM Sales develop new markets and translate the bundling of MS-OS and it's services into OEM customer benefits, like: enlarged PC usage or high margin system sales.

The 90's will be a true test of how much our vision can deliver great products in a timely manner. OEM Sales therefore needs to ask for, and help to develop more long-range product plans.

We believe that an OEM P/L should be run on a subsidiary level and sales incentives need to be closer monitored by OEM Sales management. OEM being the most profitable business for Microsoft in the 90's, we'll need to be even more predictable tomorrow when it comes to achieving fiscal results. Therefore it is important that a well integrated and an easy to use OEM business system be developed and maintained.

(All the recommendations in this document are for MS internal executive discussion. Please do not distribute this document further.)

OEM Pricing

The Manufacturer's View

OEM manufacturers are increasingly sensitive to added costs. The PC being a commodity and most OEMs not creating enough differentiation, PC pricing has become a dominant factor to gain market share. OEMs are pressuring us more and more to accept the fact that operating system software needs to follow their economy of scale model. Expressed in % of SRP per. today we are asking for 2-3 times as much money for MS DOS as we did 5 years ago. At the same time, manufactures have responded to the competitive pressure by increasing their buying power, e.g. selling more volume, merging companies and taking advantage of low cost labor areas. The overall industry growth has slowed to 10-15% and a more maturing industry has been looking for low cost distribution alternatives like direct mail. And if all this has not helped, we have seen some companies folding their tent or limping along in a very unhealthy fashion.

The Microsoft View

Prices for MS DOS have been kept fairly unchanged over the last 4 years, not counting the undoing of some flat fee contracts. During that time-frame we added MS Net connectivity which added net 4% to the DOS royalties. All other DOS improvements have been minor and not enabling OEMs to sell higher margin systems (>32 MB disk support being the only exception). If we cannot improve DOS significantly, the price eventually has to come down and follow the OEM pricing model.

In understanding this, Microsoft has offered more advanced operating system software to make high end = higher margin PCs more popular and encourage other ISVs to develop more sophisticated applications for these new platforms. Only if we can continue to do this can we expect to enjoy a less dramatic price erosion then say CPU - or memory manufacturers. Despite all of our efforts, the results have been minimal: after 5 years of shipping Windows, we added only 10% to our DOS revenues through Win royalties and OS/2 and it's related products will add only 4% more earned revenue in FY 1990: nearly 3 years after its introduction! The reasons are well understood

- -New operating system service benefits have not been marketed effectively
- -Truly innovative applications have been coming along slowly.
- -Productivity gains based on the new technology have not been understood by OEMs and endusers.

The net result is an early excitement which has produced more UPBs than we would have liked, without enlarging PC usage. Until enlarged PC usage based on new operating system software services can be achieved, our OEM pricing is highly vulnerable. Our pricing philosophy; same price for more OS features will only work if the OEM can clearly see more higher margin unit sales. This will challenge the OEM sales force for the years to come. Every 1$ price decrease for DOS will yield to at least 15M$ less royalties in FY94. This would translate into at least 1M more WIN systems to be sold instead or at least 300K more OS/2 systems.

The recommendation is therefore to resist any DOS price decrease until WIN and OS/2 based systems are a demanded commodity and to triple our effort to achieve this. Adding more utilities to DOS to enhance its usage and competitiveness are naturally as important. As a tactical measure we might have to price them separately (like the Shell) just to keep the DOS prices where they are today as long as possible.

Even if OS/2 takes off and gains 20% share by 1994, we will need to manage its pricing carefully knowing that OEMs will demand not to pay DOS royalties for true OS/2 systems.

In building a model based on a conservative processor forecast (see attached) with the following key assumptions:

	FY 90 Royalty ($)	FY 90 Penetration (%)	FY94 Royalty ($)	FY94 Penetration (%)
DOS/System	17	97.0	13	73.0
WIN/Copy	8	19.0	13	41.0
OS/2/Copy	106	.5	56	20.0

The effectively earned royalty component per licensed (non-IBM) system will look like this:

	FY90 Royalty Per System ($)	FY94 Royalty Per System ($)
DOS	16.4	9.3
Net	.6	.4
WIN	1.6	5.6
OS/2	.6	11.2
LAN/SQL/COM	.5	2.2
Total	19.7	28.7

If we could keep DOS prices constant and make all manufacturers pay for DOS, even for OS/2 systems, our upside would be approx. 100M$, yielding us $35.6 per system sold. A dream, no a challenge for OEM Sales and System Product Marketing to manage OS/2 and DOS pricing! (I purposely did not discuss any Xenix, APPS language or PDL related royalties (please see 5 year business plan model attached)).

Increasing per royalties per systems sold
In developing the business model, we checked for market potential and conflicts disregarding any non Intel x86- platforms which might emerge. This was based on a processor forecast assuming the following penetration rates:

	FY90	*FY94*
% 8086	23.2	3.5
% 286	52.3	19.4
% 386sx	8.5	47.1
% 386dx	15.9	8.3
% 486/P5	.1	21.7

In determining our market potential for DOS/WIN and OS/2, we looked at the combined 286 and 386sx systems as a potential WIN market and the combined 386 dx and 486/P5 segment as a potential OS/2 market.

FY94 Penetration Check in %

	OS Potential	OEM Model Assumption
DOS	100.0	73.0
WIN	66.5	40.8
OS/2	30.0	20.0

This would leave us enough room to sell additional copies of OS/2 and WIN as FC, and in the case of OS/2, allow for some UNIX penetration. We understand that the high end market penetration for

486/P5 and 386 dx systems might be conservative. The idea was to generate achievable numbers without making assumptions which would be too aggressive.

As discussed in the previous chapter, we in OEM Sales are challenged to increase current OS/2 and WIN market penetration to the displayed numbers. We will need a lot of help from OEM and Systems Marketing to get there. At the same time, ambitious goals like this are crying for a well managed and focused sales force.

Developing New Markets

Our growth potential being severely dependant on Intel PC growth and shifting endusers demand to Win and OS/2 based systems, we need to pursue new markets aggressively to make up any potential product delay, shift to UNIX or an even slower than expected acceptance of these new platforms in the market place. In any case, Sales and Marketing need to work closely together to understand the opportunities and develop well thought out long term plans.

To be explored Market Segment

1. "Non licensed" PCs

a) The resistance of new or smaller manufacturers to license DOS from us will be a fact in the 90's. We expect this category of customers to grow twice as fast as the rest of the market. Today we capture this market by selling FG DOS.

FY90 Estimated FG DOS Sales

	Estimated Units Sold	Units of Non-Licensed PCs Sold	Penetration
USA*	400	750	53%
Europe	200	750	27%
Other	250	500	50%

*includes Phoenix Units

This is based on an equal market potential for the USA and European markets with the remaining 25% sold outside. It is obvious that our European penetration is half compared to all others. A dedicated sales force is needed to serve this market segment. Experience could be transferred from the US territory model. Today this represents at least 15M$ of additional annual business in Europe.

b) This being a short term measure means more thought and effort has to go into how to attract these type of OEMs and make them per system licenses. Probably the only way to reduce piracy and decrease competitive market share. Because most of these PCs are imports, we need to try harder to license them at the source. I am afraid that most of them reach their destination as components. Today these systems represent 13% of total PC Sales with the danger of exceeding 17% by FY94. The only way to capture 90% of them seems to be licensing ROM DOS to board manufactures in addition to selling FG DOS. We believe this needs immediate research, because my numbers aren't as precise as I'd like them. The result of this could then develop into a FE OEM sales challenge.

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2. "Emerging Markets"

•Multimedia PCs
•Poquet PCs are Calc replacement
•Handwriting computers
•Risc Servers/WS/PCs
•Imbedded controllers
•Printer Software

We will train the OEM Sales force to sell add ons to our existing platforms to get a high MM, Poquet and handwriting PC market presence. Working close with marketing will achieve this as it has in the past. We will need specialized sales personal or VAD/partners for non PC areas like PDL and imbedded controller markets. We will evolve this over time, if these products become mainstream. In all of these emerging markets, we need to push for standards and high penetration, with whatever sales approach is best, like employing specialists when necessary.

3. Development countries

Investments in headcount and a well balanced pricing model will be needed for markets like Brazil/South America, Eastern Bloc, Russia and India.

I believe we need to be very proactive and commit a marketing specialist next FY to follow the developments. There is huge potential out there which we might not be able to capture with standard means. Currency availability, timing and cultural issues being the major reason.

Developing Customer Relationships

The Role of OEM Marketing
Today OEM Marketing in Redmond takes care of internal marketing communication and is the liaison to System Product Marketing. The group runs a quarterly forecasting system, which needs further development and integration with finance. At the same time, it should be made available to AMs on a WW basis and allow instant local access and manipulation. Mending the OEM price list and the OEM Policy and Procedure Book is another ongoing activity for the Redmond group. OEM Marketing also conducts training for AMs using internal and external consultants.

A second marketing group is located in Japan, which focuses on the local market needs and evaluates new technology and recommends new product developments. This group works much closer with customers than the Redmond group. But it is questionable what the "rest" of MS OEM Sales gains from their efforts - as much as their local WIN and OS/2 thrust is appreciated and needed.

In observing both groups activities for the last 9 months, it has become clear to me that much more needs to be done to achieve our ambitious penetration and market development goals. With System Product Marketing focusing on products specific issues, OEM Marketing needs to focus on channel dynamics and how MS-OS services can be translated into true customer benefits, meaning selling more PCs. At the same time, application trends need to be reported and turned into product feedback. This should help us encourage more PC usage and fight off non MS-OS.

Proposed Redmond OEM Marketing Organization

Department Manager

- OEM Marketing SE (3)
  - LAN/COM/SQL
  - OS/2
  - DOS/WIN/MM
- Marketing Research (2)
  - Channel Analysis
  - Development Country Specialist
- Communication Specialist (1)
- Forecasting Operations & System Development (2)

The dedicated marketing SEs will be application driven and will relay customer feedback to product marketing. Product positioning to OEM customers, OEM sales training, penetration analysis and System Product Marketing liaison duties will keep them busy. This new structure would mean adding 5 more people next FY.

The Japanese marketing group will have to report on a dotted line into this group and share their findings. This way we could share resources and experience. One person in Japan should be dedicated to all OEM PDL issues, another to imbedded controllers/Poquet PCs. The rest of the them will have to continue to focus on local Japanese issues, but new technology trends need to be shared earlier. If this works, we might have a model for some dedicated European Marketing people in FY 92/3.

In a nutshell: OEM Marketing in the 90s has to help OEM Sales to be a value added resource to our customers. This will result in re-educating AMs and develop them into true consultants. Without such a massive effort, we might be creating competitive openings while not creating the right products or relationships needed being successful in the OEM Market.

Sales Operations

OEM selling system products to PC manufacturers and enhancing our strategic relationship with them has given MS a decisive edge in the PC-SW industry.

During the last three years, the PC industry has undergone dramatic changes. Our response has been a complete but evolutionary reorganization of the US OEM Sales force and a declared WW focus on our OEM business as well as adding new sales offices. This was combined with an effort to establish an OEM marketing function to ensure better training and information flow to OEM Account and Sales Mangers. The results have been impressive when you compare OEM revenue/profit growth with the overall market growth. Even this FY, OEM's growth will be twice as fast as the PC market growth. But will our current sales set up enable us to achieve our ambitious penetration goals?

Despite our success on paper, we all know that some of our results have actually come from prepaid royalties. We currently predict that the US will have a 25M$ UPB balance by the end of this FY and

International will "get" to 72M$ (of which 36M$ will be "caused" by Japanese companies). This will represent close to 1/3 of this FY's revenues and will long term hamper our growth as well as our customer relationships. In a nutshell, on paper we look better than we really are, face a tremendous challenge to serve our customers well, and increase earned royalties per system sold by more than 50% within 4 years.

OEM Sales Strengths and Weaknesses

USA
Currently we have 4 sales groups in the US. Three are selling to named accounts, one is working the US as 5 sales territories to serve the smaller customers. To be a named account you have to be a 1M$+ revenue potential or be of some strategic importance. The AMs in these groups normally serve between 1-5 customers. The territory minded sales group sell to all customers within a defined geography -- they sell FG-DOS as well as royalty licenses. AMs in this group are normally less experienced but are seen as potential AMs for named accounts if they improve their AM skills and demonstrate a solid sales record. All OEM personnel are on a straight salary with 15% bonus potential. For FG DOS sales, the group has a monthly quota and an additional incentive plan. For some named accounts who have a strong long-term commitment to us and are working harder to push all our product platforms, we have added a technical resource in PSS to coordinate development projects between product groups and the customer (e.g. NCR, Compaq, Unisys (TBH) and HP (contract obligation)).

Named Account Groups:

Strength

- Successful closings of all key opportunities - All accounts have "stayed" with us, and the success of one AM motivates all others -- call it healthy competition.

- Continuously trained and informed - Inside and outside training programs are done regularly and it shows. Being in one location and having very small groups with strong mangers focusing on key OEMs is the reason we are in good shape.

Weakness

- Communication with customers - 1) We seem to be talking mainly to R&D and marketing people-- not to the people who sell. 2) Customer feedback is not always given to the product groups. 3) We negotiate too often from a position of strength and let the customer feel it.

- Customers with high international sales get served only at the central buying location - AMs are just beginning to understand that companies of this nature need local sales, marketing and sometimes technical services. Today, MS is not organized well enough to make this happen.

- Can't ensure that per copy products sell through - I am unsure if this is only an OEM Sales force issue. It surely is a combination of APPS availability, product competitiveness, product availability in the channel, and the negligence of the PC manufacturers sales force. Only the last one can be influenced by OEM Sales--but how much if SW product sales makes up only 5-10% of PC manufacturer's revenues? Is the OEM channel a good exclusive channel for per copy system products at all?

<u>Territory Focused Groups: (Selling to No Name Accounts)</u>

Strength

- **Systematically look for new customers - Even if we still have to improve some of their tools, this approach has found us more opportunities than we expected.**

- **Exploring additional opportunities with existing customers**

- Shifting customers from per copy FG-DOS to per system royalty licensees when they grow as well as selling them WIN, Mice, Works, and FG has increased MS penetration.

Weakness

- **Territories are still too big - With the number of unlicensed machines growing 2-3 times as fast as the overall market, we will have to assign more people to this segment to capture our future customers. If the territory is too big, we not only lose potential business but limit the personal growth of the AMs.**

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International

While the International Sales force has the same basic mission as the domestic one, the way it is managed is very different. Decentralized by nature and located in offices around the world where PC manufacturers are located, International OEM Sales is part of the subsidiary sales team. For few development countries we do OEM business out of Redmond. Looking at a yield table shows that some areas marked with **** are understaffed:

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Benelux	2.0	2.8	0.5	4.0	5.0	
France	5.5	5.8	2.2	2.5	2.8	
Germany	9.6	14.3	1.5	6.4	9.5	****
Italy	7.2	7.0	1.0	7.2	7.0	****
Spain	0.8	0.9	0.3	2.0	3.0	
Sweden	4.5	6.6	1.0	4.5	6.5	****
UK	7.2	9.8	2.0	3.6	4.9	
Europe	36.8	46.8	8.5	4.3	5.5	
Japan	40.1	57.0	8.0	5.0	7.1	****
Korea	16.8	19.5	3.0	5.5	6.5	****
Taiwan	27.7	23.5	3.0	9.2	7.8	****
Redmond F	1.1	1.6	1.0	1.1	1.6	
FE	85.5	101.6	15.0	5.7	6.8	
AIME/APG	2.6	3.0	1.2	2.2	2.5	
Australia	0.5	0.5	0.5	1.0	1.0	
Brazil/LA	1.4	1.0	1.3	1.1	0.8	
Canada	6.0	8.0	0.4	15.0	20.0	****
Mexico	1.1	1.2	0.8	1.4	1.5	
ICON	11.6	13.7	4.2	2.8	3.3	
GAAP		($4.60)				
Sub Total I	133.7	157.5	27.7	4.8	5.7	
USA Royal	109.6	113.6	25.3	4.3	4.5	
USA FG	13.2	17.3	4.7	2.8	3.7	
GAAP		1.0				
USA	122.8	131.9	30.0	4.1	4.4	
TOTAL	256.5	289.4	57.7	4.4	5.0	

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This has lead to insufficient sales service considered as "hit and run" tactics by our customers. This table gets complemented by looking at what segment Intl. OEM sales managers focus on in addition to selling royalty and FG products to OEM:

Country/Region	[illegible]	Education	[illegible]	[illegible]	OEM-FG	FG DOS
Benelux	X	X	X	X	X	X
France				X		X
Germany				X	X	X
Italy				X	X	X
Spain			X	X	X	X
Sweden				X	X	X
UK		X	X	X	X	X
Japan				X	X	
Korea				X		
Taiwan				X	X	X
Redmond FG					X	
AIME/APG	X	X	X	X	X	X
Australia			X	X	X	X
Brazil/LA				X	X	
Canada						
Mexico			X	X	X	X
USA				X	Ltd	X

Only in the FE, the US, and now in France do we have a focused OEM royalty sales force. In all other areas the sales force has been defocused on the AM and Sales Management level to sell to other channels or to sell FG out of the local warehouses to OEMs and other customers. I consider this a dangerous development for the years to come, where we will need a very disciplined and focused approach to avoid DOS and OS/2 price erosion to achieve our penetration goals. In looking at both tables, it is obvious to me that at the subsidiary level, a lot of manpower has been derailed to make warehouse sales objectives happen.

Strength

- Seasoned people employed - Most subs (GmbH and Taiwan being the exception) have longer time employees as AMs or managers. If they are not bored - and they shouldn't - this could be an advantage.
- Never lost a major customer true, but we had more emergencies than in the US and more complaints.

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Weakness

- Focus and training is not sufficient - This is caused by not being in on e location as well as the other business being combined with OEM royalty sales.
- Minimal support for multinational OEMs based on company objectives - US and FE accounts are not sufficiently supported locally—opens opportunities for Novell, DRI and UNIX.
- Not enough of the right information at their fingertips - a real problem when you sell too many products and our current information is not read or provided in a convenient format.
- Customers are badly informed - if at all. I am surprised to find out how few pieces of information are getting passed on on a regular basis. Much of the information is actually available and distributed, but there seems to be an issue of finding the time to distribute it or no interest in doing so. (Hmm)
- Customers feedback is not channelled to product groups systematically – the occasional outcry why somebody is not part of an ESP is typical for this. No time, no interest?

The International OEM Sales force is paid the same way as the US sales force. Up to 15% bonus potential above regular salary, because of their defocus, a lot of the bonuses are not given for OEM sales achievement. Looking at cost comparison between the US and the Intl. OEM operations, it seems obvious to me that the cost of doing business outside the US is higher than inside the US. In order to reach this conclusion, you have to compare the Intl. and US P/L statements. Unfortunately, nothing else than the bottom line is comparable, because allocations in the US are direct costs in Intl. At the same time, marketing expenses in the US are not controlled by the OEM group. They should be in the allocation group and are a much higher than Intl. OEM marketing expenses. Reshuffling some of this and excluding marketing expenses, it looks like we need 41.5% more operating expenses outside the US, whereby the allocations per $ of revenue are 6.1% higher for International because of the localization charges. It seems to me that despite running high profitable business charges to the OEM channel in International are overstated by at least by 2-3M$ per year, after taking different salary structures into account. It is hard for me to argue about headcount allocations, because I could not find any consolidated information. Nevertheless, I suspect that there are lots of admin/PSS and even sales heads allocated to the OEM channel who are not involved in royalty OEM activities. Further, it is hard to understand what is done with International marketing funds. In the US it is not understood either, why the product group spends this money only.

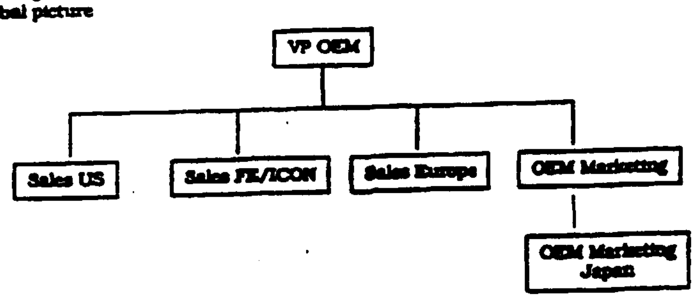
Recommendations:

1) Run a true OEM P/L on subsidiary level to understand OEM channel cost structure and get GMs attention. At the same time, consolidate the different P/L reports that they get comparable.

2) Allocate marketing money to the discretion of the director of OEM in a certain area. This includes the US. This way we can assume that the money is spent in promoting the right products and helping the right OEM customers and are not at anybodies mercy.

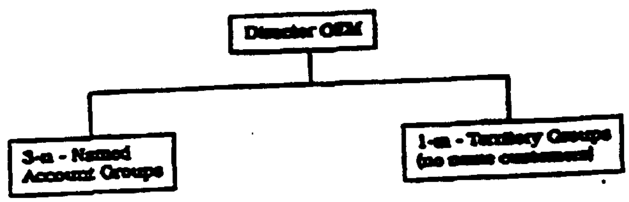
Sales force organization recommendations:

1. Global picture



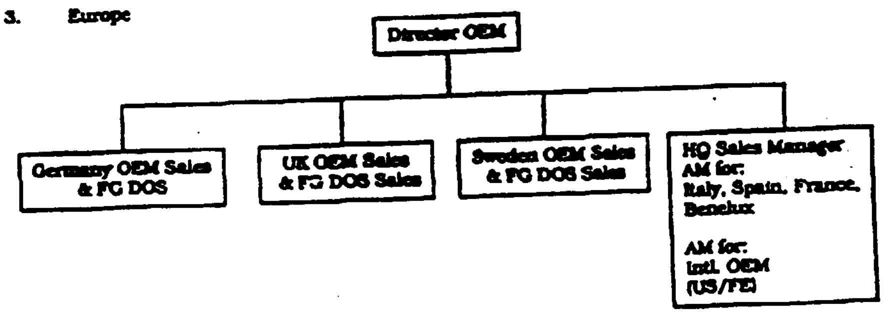
Basic structure in place today. Needs hiring of European Sales Manager and "connecting" of the marketing departments.

2. USA



Continuing to develop depending on number and size of the customers and services needed.

3. Europe



Major change here: Idea is to put all sales people in a centralized location if critical mass of 4-5 people in a subsidiary cannot be achieved.

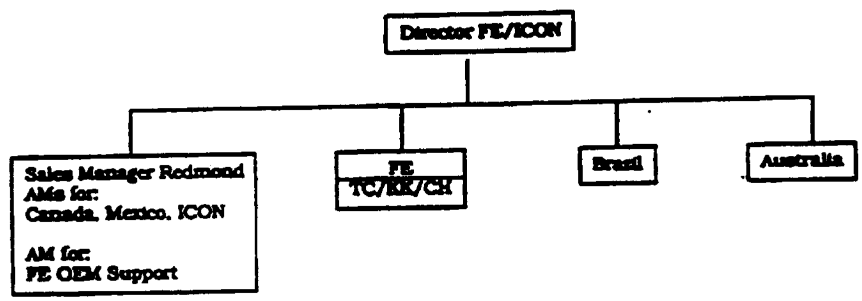
The UK and German business fulfill this criteria. If Sweden would staff up to 2 royalty AMs and 2 FG-DOS people a unit will be justified as well. We need to discuss Italy, but I believe account management could be done from Paris as well. All other countries should do business from Paris. Doing this will need work on a formula to give some money to the subs for supporting the OEMs (10%)?

It is understood that FG-DOS business will remain a local affair. It will be important for the local FG-DOS sales force to understand when to transfer a customer to the centralized group. Learning from the US example, the FG-DOS group should serve all no named OEMs in the territory either through strictly standard FG-DOS or royalty agreements. Only named accounts would be served from the central place.

The reasons for recommending this are: shorter communication lines, more focus and an easier way to train people. At the same time, the director of OEM Sales Europe would be closer to where the action is. And last but not least, we can guarantee better sales services to our customers. The added costs are probably not significant compared to benefits, whereby finding people with local languages skills might not be that easy.

In 92/93 a European OEM marketing group should be added.

FE/ICON



Applying the same principles and taking the longer distances into account, only FE, Brazil and Australia should have their own OEM AMs. All others should be centralized and managed out of Redmond reporting to a sales manager. Looking at the ICON yields, this should save us some manpower. It would make sense for ICON countries, where we do not have a sub/warehouse to make most of these people territory sales people selling both FG-DOS as well as royalties. This would probably increase our overall penetration. In doing this the director of FE/ICON would need a Sales Manager reporting to him.

During the 90's we should develop Japan into a FE OEM area to serve all FE countries including Australia. This could change the director of OEM's job in Redmond. The timing for this is not very critical today.

Comments:

I. All these proposed changes should be done with better customer service in mind yielding in higher market penetration and closer feedback. This should foster better relationships in understanding customer needs and the dynamic changes in the PC industry early on.

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II. Regarding the FG-DOS business all subs need to learn from the US group: How telemarketing and direct sales to OEMs is done and measured. A training class based on that experience is highly recommended and should be considered for Q1/91. In adding trained sales people to pursue these efforts, we believe that 30M$ more business can be obtained in FY91.

III. I did not do any detailed org charts, I will after we all agree on the new organization.

IV. Adding OEM sales support to nurture our International customers in the US and in Europe will be more important in the 90's. Regardless of revenue recognition, we will have to evangelize OEM subsidiaries. Otherwise we run the danger of creating competitive openings. Economy of scale and management experience dictates that we do this from a central place and not "leave" it to subsidiary initiatives. Companies coming into my mind: Compaq, HP, NEC, Acer, Olivetti, Tandon, AST, Zenith, CBM, Epson, Toshiba, Atari, Tandy/Victor. If Siemens and Bull get more aggressive in 92's Europe, they should be added as well.

V. Last but not least some comments regarding MATRIX management. This was started in OEM nine months ago and seems to show some progress. To be honest, I believe that most of the progress is related to Ron and myself being well known in the FE and Europe. In doing a partial centralization we will strengthen this concept but I highly recommend adapting another rule: all stock options for OEM personnel WW are granted by the VP of OEM based on achieving channel objectives only. This will further guarantee a highly functional focus and a better OEM sales culture.

Customer Expectations

- **Ship within 30 days of IBM and for a retail release.**
  This is still a dream for us and most of our customers. Generally, we are not set up to support all key customers to do this and the customers do not sync their plans with ours. Even if they do try looking hard at the current state of delivery slippages, they are often out of luck. More predictability and a stronger need (an OEM sales challenge) to ship our products early would improve this but probably never completely achieve this goal.

- **Keep us continuously informed about schedules, plans, and changes.**
  This has been done better in the US than outside. We will need decisive efforts from OEM Marketing to make this easier for the local AMs. We are working on a monthly news flash–edited for OEM customer distribution.

- **Provide excellent technical support on a when-needed basis.**
  ONLINE has been a great improvement of the situation in the US and for key International customers. The completion of PRISM will put the subs on equal footing with the US. An added phone component will enhance quality even further. We need to think about offering a nominal fee based adaptation support in FY91. Paying for technical support does not seem to upset OEM customers anymore. I am confident that we can continue to improve this sector over time and keep our customers happy.

- **Timely delivery of SW, CRC, etc.**
  This process seems to be under control. But International customers continuously complain about the time it takes to get things shipped. Can we speed up our administrative procedures? Another area of constant customer complaint is the delivery mechanism for pre-release. We will again make this a project and recommend a solution which does not need constant AM monitoring.

- **Share plans and work on future products**
  a) The idea of having regular scheduled executive customer briefings has been fully implemented in the US organization. It is lacking understanding in some international areas. This needs to get put in place short term. The new organization will enable us to implement this easier.

  b) Working on future projects has and will be done in a scheduled way. If customers are working on a lot of projects across product groups adding a dedicated technical resource in PSS seems to improve results. This should only be considered for SM8+ customers/year, truly committed to our platforms.

5 Year Plan

Attached

	A	B	C	D	E	F	G
1		FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
2	USA		11.1%	9.1%	7.8%	7.1%	8.5%
3	86	820,300	650,000	450,000	400,000	300,000	150,000
4	286	2,168,614	2,300,000	2,150,000	2,000,000	1,750,000	1,000,000
5	386	808,174	1,250,000	1,900,000	2,250,000	2,600,000	3,500,000
6	486	0	18,000	100,000	300,000	650,000	1,100,000
7	SUBTOT	3,795,088	4,218,000	4,600,000	4,950,000	5,300,000	5,750,000
8	INTL		18.4%	9.8%	8.4%	7.2%	8.0%
9	86	2,528,879	2,118,900	1,400,000	1,100,000	850,000	525,000
10	286	2,288,057	3,070,450	3,450,000	3,200,000	2,700,000	2,100,000
11	386	414,622	1,000,475	1,700,000	2,550,000	3,250,000	4,000,000
12	486	0	5,000	200,000	470,000	1,050,000	1,850,000
13	SUBTOT	5,232,558	6,194,885	6,750,000	7,320,000	7,850,000	8,475,000
14	IBM		9.2%	8.8%	7.9%	7.6%	7.5%
15	86	370,200	135,000	100,000	0	0	0
16	286	1,480,800	1,020,000	1,500,000	1,300,000	1,100,000	350,000
17	386	617,000	835,000	1,300,000	1,750,000	2,000,000	2,500,000
18	486	0	5,000	25,000	90,000	200,000	750,000
19	SUBTOT	2,468,000	2,695,000	2,925,000	3,130,000	3,300,000	3,600,000
20	LIC+IBM		14.0%	8.9%	7.9%	7.1%	8.0%
21	86	3,720,387	2,903,900	1,950,000	1,500,000	1,150,000	675,000
22	286	5,937,471	6,390,450	7,100,000	6,500,000	5,550,000	3,450,000
23	386	1,837,796	3,085,475	4,900,000	6,550,000	7,850,000	10,000,000
24	486	0	28,000	325,000	860,000	1,900,000	3,700,000
25	SUBTOT	11,495,654	13,107,885	14,275,000	15,400,000	16,500,000	17,825,000
26	NONLIC		36.6%	19.0%	15.9%	14.5%	13.5%
27	86	650,000	600,000	350,000	250,000	150,000	75,000
28	286	750,000	1,000,000	1,300,000	1,300,000	900,000	700,000
29	386	75,000	400,000	700,000	1,100,000	1,700,000	1,850,000
30	486			30,000	100,000	400,000	950,000
31	SUBTOT	1,475,000	2,000,000	2,380,000	2,750,000	3,150,000	3,575,000
32	TOT		16.5%	10.2%	9.0%	8.3%	8.9%
33	86	4,370,387	3,503,900	2,300,000	1,750,000	1,300,000	750,000
34	286	6,687,471	7,390,450	8,400,000	7,800,000	6,450,000	4,150,000
35	386	1,912,796	3,485,475	5,600,000	7,650,000	9,550,000	11,850,000
36	486	0	28,000	355,000	960,000	2,300,000	4,650,000
37	TOT	12,970,654	15,107,885	16,655,000	18,150,000	19,650,000	21,400,000
38	LIC		15.5%	9.0%	8.1%	7.2%	8.2%
39	86	3,350,187	2,768,900	1,850,000	1,500,000	1,150,000	675,000
40	286	4,456,671	5,270,450	5,600,000	5,200,000	4,450,000	3,100,000
41	386	1,220,796	2,250,475	3,600,000	4,800,000	5,850,000	7,500,000
42	486	0	23,000	300,000	770,000	1,700,000	2,950,000
43	SUBTOT	9,027,654	10,412,885	11,350,000	12,270,000	13,150,000	14,225,000
44	EURO		15.7%	11.1%	10.9%	7.8%	9.0%
45	86	896,419	600,000	450,000	300,000	200,000	75,000
46	286	600,648	900,000	1,000,000	1,000,000	800,000	600,000
47	386	136,014	385,000	600,000	900,000	1,200,000	1,400,000
48	486	0	5,000	50,000	120,000	300,000	650,000
49	SUBTOT	1,633,081	1,890,000	2,100,000	2,320,000	2,500,000	2,725,000
50	FE/ROW		19.6%	8.0%	7.5%	7.0%	7.5%
51	86	1,633,480	1,518,900	950,000	800,000	650,000	450,000
52	286	1,687,409	2,170,450	2,450,000	2,200,000	1,900,000	1,500,000
53	386	278,608	615,475	1,100,000	1,650,000	2,050,000	2,600,000
54	486	0	0	150,000	350,000	750,000	1,200,000
55	SUBTOT	3,599,477	4,304,885	4,650,000	5,000,000	5,350,000	5,750,000

Processor forecast 89 - 94

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[illegible] OEM Revenues

OEMSA.XLS

	FY88	FY90	FY91	FY92	FY93	FY94
essors (000)						
IBM Machines	1,111	1,213	1,316	1,400	1,500	1,600
Other OEM (licensed) Machines	3,795	4,218	4,600	4,550	5,300	5,750
Total Machines	4,906	5,431	5,916	6,200	6,800	7,370
etration of Major Products on non-IBM Processors						
% shipping DOS	94.6%	94.6%	[illegible]	80.0%	75.0%	70.0%
% shipping Windows	26.1%	27.5%	32.0%	35.0%	40.0%	45.0%
% shipping OS/2	0.2%	[illegible]	4.2%	10.0%	16.5%	23.0%
Units of Lan Man	4147	12,000	25,000	30,000	40,000	50,000
rage Royalty for Major Products on non-IBM processors						
$ per DOS	$17.00	$17.25	$17.25	$16.00	$15.00	$14.00
$ per Windows	$8.00	$7.20	$8.50	$11.00	$12.00	$13.00
$ per OS/2 (gross)	$104.08	$105.00	$75.00	$60.00	$56.00	$50.00
$ per Lan Man	$407.04	$410.00	$400.00	$375.00	$375.00	$375.00
ual Earned Royalties ($000) on Major Products, non-IBM processors						
DOS	$61,915	$88,3[illegible]	$71,416	$63,200	$50,625	$56,200
Windows	$6,[illegible]	$8,352	$13,904	$18,[illegible]	$25,440	$33,[illegible]
OS/2	$1,197	$2,100	$14,400	$28,700	$48,000	$66,125
Lan Man	$1,688	$4,920	$10,000	$11,250	$15,000	$18,750
ual Earned Royalties ($000) on Major Products, IBM processors						
DOS	$0	$0	$0	$0	$0	$0
Win	$300	$300	$0	$0	$0	$0
OS/2 (net)	$857	$1,500	$5,400	$8,700	$12,200	$15,250
Lan Man	$1,058	$750	$1,500	$2,500	$3,000	$3,500
ual Earned Royalties ($000) on Minor Products, all processors						
Printer	$0	$500	$1,000	$2,000	$3,000	$4,000
MS-Net	$4,422	$5,500	$6,000	$6,500	$5,000	$4,500
SQL Server	$472	$250	$250	$400	$500	$500
Comm Server	$0	$0	$250	$800	$1500	$2500
Xenix	$8,913	$9,000	$10,500	$12,000	$14,500	$16,000
Languages	$941	$800	$800	$800	$800	$800
Mac	($12)	$250	$0	$0	$0	$0
CD-ROM	$82	$200	$400	$1,000	$2,000	$2,500
ABU	$3,063	$2,500	$2,000	$3,000	$3,500	$4,000
BASIS	$0	$0	$0	$0	$0	$0
EBU	$0	$0	$0	$0	$0	$0
OBU	$0	$0	$0	$0	$0	$0
al Actual Earned Royalties	$91,006	$108,127	$130,279	$160,878	$193,163	$228,463
UPS Revenue	$12,094	$8,000	$0	$0	$0	$0
l Reserve	$0	($2,500)	($10,000)	($5,000)	$0	$0
al Royalty Revenue	$103,100	$112,627	$120,279	$155,878	$193,163	$228,463
ished Goods						
Mac	$747	$2,000	$3,000	$3,500	$4,500	$6,000
Packaged DOS	$7,458	$10,500	$11,500	$12,000	$14,500	$17,000
Packaged OS/2/386K	$1,252	$500	$500	$1,000	$2,500	$4,500
Packaged Lan Man	$0	$0	$300	$450	$500	$550
Packaged SQL Server	$0	$0	$100	$150	$150	$150
Packaged Comm Server	$0	$0	$0	$0	$0	$0
Other packaged goods	$2,477	$3,500	$3,000	$3,000	$3,300	$3,800
al Finished Goods Revenue	$11,934	$16,500	$18,400	$20,100	$25,450	$32,000
al OEM Channel Revenue	$115,034	$129,127	$146,679	$175,978	$218,613	$258,463

INT'L OEM Revenue

OEMINT.XLS

International	FY89	FY90	FY91	FY92	FY93	FY94
Processors (000)						
IBM Machines	1,357	1,482	1,800	1,722	1,843	1,980
Other OEM (Licensed) Machines	5,223	6,195	6,750	7,320	7,800	8,475
Total Machines	6,580	7,677	8,550	9,042	9,643	10,455
Penetrations of Major Products on non-IBM Processors						
% shipping DOS	98.4%	98.4%	98.0%	90.0%	80.0%	75.0%
% shipping Windows	17.2%	13.0%	16.5%	23.0%	30.0%	30.0%
% shipping OS/2	0.2%	0.6%	2.5%	7.0%	11.5%	18.0%
Units of Lan Man	433	1,500	10,000	15,000	20,000	25,000
Average Royalty for Major Products on non-IBM processors						
$ per DOS	$16.85	$16.85	$16.50	$14.50	$13.00	$12.00
$ per Windows	$8.44	$8.50	$10.00	$12.00	$13.50	$14.00
$ per OS/2 (gross)	$170.57	$110.00	$95.00	$80.00	$70.00	$60.00
$ per Lan Man	$623.56	$400.00	$400.00	$400.00	$400.00	$400.00
Actual Earned Royalties ($000) on Major Products, non-IBM processors						
DOS (incl GW)	$86,756	$102,714	$108,140	$95,980	$81,840	$76,275
Windows	$7,585	$7,233	$11,004	$20,203	$31,703	$43,887
OS/2	$1,418	$2,726	$10,691	$40,982	$62,193	$81,530
Lan Man	$270	$600	$4,000	$6,000	$8,000	$10,000
Actual Earned Royalties ($000) on Major Products, IBM processors						
DOS	$0	$0	$0	$0	$0	$0
Win	$0	$0	$0	$0	$0	$0
OS/2 (net)	$0	$0	$0	$0	$0	$0
Lan Man	$0	$0	$0	$0	$0	$0
Actual Earned Royalties ($000) on Minor Products, all processors						
Printer	$0	$1,000	$3,000	$5,000	$8,000	$12,000
MS-Net	$1,271	$500	$800	$600	$500	$500
SQL Server	$0	$0	$200	$400	$400	$400
Comm Server	$0	$0	$200	$300	$300	$300
Xenix	$2,345	$1,000	$1,200	$1,300	$1,300	$1,300
Languages	$350	$450	$500	$500	$500	$500
Misc.	$703	$500	$500	$500	$500	$500
CD-ROM	$523	$350	$500	$2,500	$5,000	$8,000
AMU	$4,436	$3,500	$4,000	$4,000	$4,500	$5,000
DAIW	$0	$0	$0	$0	$0	$0
EMU	$0	$0	$0	$0	$0	$0
OEU	$0	$0	$0	$0	$0	$0
Total Actual Earned Royalties	$105,657	$120,573	$151,573	$176,121	$206,025	$251,792
Net UPB Revenue	$33,940	$44,000	$15,000	$8,000	$0	$0
UPB Reserve	$0	($5,000)	($5,000)	($20,000)	($10,000)	$0
Total Royalty Revenue	$139,597	$159,573	$161,573	$164,121	$196,025	$251,792
Finished Goods						
Mice	$0	$0	$0	$0	$0	$0
Packaged DOS	$0	$0	$0	$0	$0	$0
Packaged OS/2/SDK	$0	$0	$0	$0	$0	$0
Packaged Lan Man	$0	$0	$0	$0	$0	$0
Packaged SQL Server	$0	$0	$0	$0	$0	$0
Packaged Comm Server	$0	$0	$0	$0	$0	$0
Other packaged goods	$0	$0	$0	$0	$0	$0
Total Finished Goods Revenue	$0	$0	$0	$0	$0	$0
Total OEM Channel Revenue	$139,597	$159,573	$161,573	$164,121	$196,025	$251,792

WW OEM Revenue

OEMTCON.XLS

	FY89	FY90	FY91	FY92	FY93	FY94
olidated						
essors (000)						
IBM Machines	2,468	2,695	2,925	3,130	3,350	3,600
Other OEM (licensed) Machines	9,028	10,413	11,350	12,270	13,150	14,225
Total Machines	11,496	13,108	14,275	15,400	16,500	17,825
rations of Major Products on non-IBM Processors						
% shipping DOS	96.6%	96.6%	94.0%	88.0%	78.0%	73.0%
% shipping Windows	20.9%	18.9%	22.0%	27.0%	31.0%	40.0%
% shipping OS/2	0.2%	0.9%	3.2%	8.2%	13.5%	20.0%
Units of Lan Man	4,500	12,500	35,000	45,000	60,000	75,000
ge Royalty for Major Products on non-IBM processors						
$ per DOS	$16.91	$17.01	$16.00	$15.11	$13.81	$12.81
$ per Windows	$7.70	$8.38	$10.00	$11.00	$12.50	$13.00
$ per OS/2 (gross)	$147.28	$107.97	$86.00	$71.93	$63.65	$56.86
$ per Lan Man	$532.54	$404.06	$400.00	$388.91	$388.92	$388.00
d Earned Royalties ($000) on Major Products, non-IBM processors						
DOS (incl CW)	$147,783	$171,153	$180,227	$158,300	$141,881	$132,908
Windows	$14,545	$18,233	$28,102	$38,065	$57,707	$78,904
OS/2	$2,063	$8,064	$37,481	$72,404	$112,063	$150,308
Lan Man	$2,430	$5,456	$14,000	$17,546	$23,305	$29,242
d Earned Royalties ($000) on Major Products, IBM processors						
DOS	$0	$0	$0	$0	$0	$0
Win	$90	$60	$0	$0	$0	$0
OS/2 (net)	$857	$1,500	$5,400	$8,700	$12,300	$15,250
Lan Man	$1,050	$750	$1,500	$2,500	$3,000	$3,500
d Earned Royalties ($000) on Minor Products, all processors						
Printer	$0	$1,500	$4,000	$7,000	$11,000	$14,000
MS-Net	$5,603	$8,000	$6,500	$6,000	$5,500	$5,000
SQL Server	$472	$250	$800	$850	$900	$950
Comm Server	$0	$0	$800	$1,000	$1,000	$1,000
Works	$11,258	$10,000	$11,700	$13,500	$16,000	$17,500
Languages	$1,281	$1,300	$1,300	$1,300	$1,300	$1,300
Misc.	$881	$750	$500	$500	$500	$500
CD-ROM	$805	$500	$800	$2,500	$7,000	$10,500
UBF	$8,000	$8,000	$8,000	$7,000	$8,000	$9,000
MBU	$0	$0	$0	$0	$0	$0
CBU	$0	$0	$0	$0	$0	$0
DBU	$0	$0	$0	$0	$0	$0
Actual Earned Royalties	$187,744	$227,384	$281,370	$341,884	$402,747	$481,042
NPB Revenue	$46,034	$53,000	$15,000	$8,000	$0	$0
Reserve	$0	($7,500)	($15,000)	($25,000)	($10,000)	$0
Royalty Revenue	$243,778	$272,884	$281,370	$324,884	$392,747	$481,042
ed Goods						
Hardware	$747	$2,000	$3,000	$3,500	$4,500	$6,000
Packaged DOS	$7,458	$10,500	$11,500	$12,000	$14,500	$17,000
Packaged OS/2/SDK	$1,252	$500	$500	$1,000	$2,500	$4,500
Packaged Lan Man	$0	$0	$300	$450	$500	$550
Packaged SQL Server	$0	$0	$100	$150	$150	$150
Packaged Comm Server	$0	$0	$0	$0	$0	$0
Other packaged goods	$2,477	$3,500	$3,000	$3,000	$3,300	$3,800
Finished Goods Revenue	$11,934	$16,500	$18,400	$20,100	$25,450	$32,000
OEM Channel Revenue	$255,712	$289,384	$299,770	$344,984	$418,197	$513,042

forecast by product

OEMPROD.XLS

Non-IBM Actual Unit Product Shipments (000). Based on Penetration Assumptions
(no data entry fields on this sheet)

	FY89	FY90	FY91	FY92	FY93	FY94
USA Non IBM						
DOS	3,500,000	3,584,500	4,140,000	3,900,000	3,975,000	4,085,000
Windows	900,000	1,150,950	1,472,000	1,732,500	2,120,000	2,587,300
OS/2	11,500	22,500	102,200	405,000	874,500	1,322,500
Lan Man	4,147	12,000	25,000	30,000	40,000	50,000
International Non IBM						
DOS	5,160,000	6,095,707	6,615,000	6,500,000	6,280,000	6,296,200
Windows	800,000	805,535	1,113,700	1,683,000	2,356,000	3,320,500
OS/2	7,941	24,700	169,750	512,000	902,750	1,525,500
Lan Man	433	1,300	10,000	15,000	20,000	25,000
Consolidated Non IBM						
DOS	8,730,000	10,000,057	10,726,000	10,540,000	10,284,000	10,381,250
Windows	1,800,000	1,965,385	2,585,700	3,416,100	4,475,000	5,888,000
OS/2	19,441	54,206	281,950	1,087,400	1,777,250	2,848,000
Lan Man	4,580	13,300	35,000	45,000	60,000	75,000
Actual Earned Royalty Revenue Per Processor						
USA (excl. IBM processors)	$23.90	$25.16	$30.06	$32.50	$36.45	$38.38
International	$20.13	$19.46	$22.46	$24.53	$28.25	$28.71
Total Royalty Revenue Per Processor (incl UPB and UPB forgiveness)						
USA (excl. IBM processors)	$27.17	$28.70	$27.88	$31.60	$36.45	$38.38
International	$26.00	$25.76	$23.94	$22.00	$24.97	$28.71

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