

8/94

**Novell DOS Business Planning**

**1. Novell DOS business forecast**

Estimates for the Novell DOS business were based on estimates from IDC and Gartner showing DOS shipments shrinking rapidly after Chicago (Windows 4) ships in mid 1995. Distributors are already beginning to report a slow-down in retail DOS business.

Gartner<sup>1</sup>, among others, are saying shipments of Chicago will take from a year to 18 months to ramp up. However, in the retail channel many users who would have upgraded to DOS 6 will go straight to Chicago if they have capable hardware. The exact percentage is not known because Chicago's hardware requirements are still uncertain, however estimates from Gartner<sup>2</sup> and IDC<sup>3</sup> indicate that around 10 million units of Chicago will have been shipped through the retail and upgrade channel by the end of 1995.

The steepest falls in DOS shipments will be seen around 1996-1997, when the market is expected to level out for a short time before nose-diving again in 1998 as Chicago capable PCs penetrate the installed base further.

Due to the lock-out Microsoft has achieved in the OEM market and the imminent combining of DOS and Windows in Chicago no significant revenue can be expected from the OEM channel.

	1994	1995	1996	1997	1998
Revenue (\$M)	\$7,589	\$3,233	\$1,283	\$834	\$275
Revenue growth		-57%	-60%	-35%	-67%
Operating profit (\$M)	(\$2,688)	(\$1,863)	(\$906)	(\$702)	(\$449)

**Competition**

1994	Novell	Comp#1	Comp#2	Market totals
Product	Novell DOS 7	MS-DOS 6.x	PC-DOS 6.x	
Business revenue	\$7,589,000	\$400,412,773	\$62,978,227	\$470,980,000
% Market share (\$)	1.61%	85.02%	13.37%	
Market position	3	1	2	
Installed base	3,400,000	140,000,000	30,800,000	174,000,000
% Installed base	1.95%	80.46%	17.59%	
Market position	3	1	2	

<sup>1</sup>May 2, 1994 - Chicago: Market Penetration - M-230-1065

<sup>2</sup>Gartner - Worldwide PC Operating System installed base tables

<sup>3</sup>The figures used for this report are based on our sales records and discussions with IDC.

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**5669**  
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Microsoft enjoy an completely dominant position in the market, followed closely by IBM which has the advantage of a 'genuine' MS-DOS descended kernel, and substancial marketing and promotion efforts. Novell DOS 7 is in third place with no prospect of becoming number 2 without a ten-fold increase in sales.

**Market size projection**

	1994	1995	1996	1997	1998
New market growth (\$)	(\$117,174,000)	(\$183,420,000)	(\$121,560,000)	(\$50,200,000)	(\$69,600,000)
% Market growth (\$)	-20%	-39%	-42%	-30%	-60%
Novell DOS Revenue (\$)	\$7,589,000	\$3,232,500	\$1,282,500	\$833,625	\$275,062
% Novell market (\$)	1.81%	1.12%	0.77%	0.72%	0.60%
Total market size (units)	31,498,000	18,358,000	7,500,000	5,080,000	2,000,000
% Total growth (units)	-6%	-42%	-59%	-32%	-61%
Novell market size (units)	210,806	89,792	35,625	23,156	7,642
% Novell market (units)	0.67%	0.49%	0.48%	0.46%	0.38%

**Summary**

	1994	1995	1996	1997	1998
New market growth (\$)	(\$117,174,000)	(\$183,420,000)	(\$121,560,000)	(\$50,200,000)	(\$69,600,000)
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According to all the available data the DOS market has peaked and will decline rapidly during 1995 after the introduction of Chicago. Much increased competitiveness from IBM with PC-DOS 6, and Microsoft's agreement with STAC electronics which allows them to use STAC compression patents adds to the competitive pressures today. We expect unit shipments of Novell DOS 7 to decline in 1995 in line with shrinkage of the market. Due to the small size of the current business, and the shrinking revenue opportunity it will be difficult to justify the marketing and development investment needed to prevent an ever steeper decline in revenues thereafter. The following table shows the market share we would need to achieve for a 20% year on year increase in revenues:

Required revenue growth:	1994	1995	1996	1997	1998
Novell DOS Revenue (\$)	\$7,589,000	\$9,108,800	\$10,928,160	\$13,113,792	\$15,736,550
% Novell market (\$)	1.81%	3.17%	6.58%	11.32%	34.21%

**Strategy**



When considering the correct strategy to adopt, the objectives for being in the DOS business:

1. Seed the entry level networking market by integrating peer-to-peer networking.
2. Make it easier to access NetWare by producing a NetWare-ready desktop O.S.
3. Make revenue and profits.

By offering the only credible alternative to MS-DOS we have also impacted Microsoft's ability to price DOS at a higher level. This effect will diminish once Chicago is available and Microsoft become less reliant on DOS revenues.

Because of the revenue outlook, if we choose to remain in the DOS market it will be because of the strategic payback resulting from increased sales of other product lines. We do not know how many customers buy NetWare or other Novell products as a result of their experience with Novell DOS. This could be determined through customer research, but to give a hypothetical case, if in 1995, 1 in every 200 customers did so, it would result in an additional 1,450 units of NetWare being sold.

The alternative is that Novell transition out of the DOS business, switching to other means to achieve it's objectives, while realising the maximum possible revenue in doing so.

Discussions have already taken place with IBM with a view to partnering on a common DOS offering. While these discussions did not provide either side with adequate justification to move forward, we should still keep open the possibility of licensing the Personal NetWare component of Novell DOS 7 to provide for objectives 1 and 2.

To maximize revenue we are exploring the possibility of selling the DOS business to either a single master OEM or a number of geographically dispersed OEMs. The deal would include the rights to the core O.S. source code and derivative works. We have not yet placed a value on the business, but it would require an initial investment in engineering, and an ongoing commitment to maintenance which would have to be factored in.

Novell would retain the right to ship Novell DOS 7 as part of any other Novell product. This currently includes the DOS emulation facility of UNDXWare.



Product Name:	DOB	DOB	DOB	DOB	DOB	DOB	DOB	DOB	DOB
Division:	1000	1000	1000	1000	1000	1000	1000	1000	1000
Management Team Leader:	Steve Tucker	Steve Tucker	Steve Tucker	Steve Tucker	Steve Tucker	Steve Tucker	Steve Tucker	Steve Tucker	Steve Tucker
C	03/10/84	03/10/84	03/10/84	03/10/84	03/10/84	03/10/84	03/10/84	03/10/84	03/10/84
Total Units Sold	100	100	100	100	100	100	100	100	100
Average Selling Price	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total Revenue	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of Sales:									
Materials	100	100	100	100	100	100	100	100	100
Manufacturing	100	100	100	100	100	100	100	100	100
Indirect COG, including Op	100	100	100	100	100	100	100	100	100
Education	100	100	100	100	100	100	100	100	100
Services	100	100	100	100	100	100	100	100	100
Total Cost of Sales	100	100	100	100	100	100	100	100	100
Gross Profit	100	100	100	100	100	100	100	100	100
Operating Expenses:									
Product Marketing	100	100	100	100	100	100	100	100	100
Promotions and Advertising	100	100	100	100	100	100	100	100	100
Sales/Marketing	100	100	100	100	100	100	100	100	100
Product Development	100	100	100	100	100	100	100	100	100
General & Administrative	100	100	100	100	100	100	100	100	100
Total Operating Expenses	100	100	100	100	100	100	100	100	100
Operating Profit	100	100	100	100	100	100	100	100	100
Product Type: Channel									
A-Distribution									
B-C&M Channel									
C-Distribution of A and B									
Product Type: Support									
1-Low volume, low complexity									
2-High volume, low complexity									
3-Low volume, high complexity									
4-High volume, high complexity									
Average number of distributed business units, including contractors									
Average number of product marketing headcount in business unit, including contractors									



Q1 1988 EBIT	Q2 1988 EBIT	Q3 1988 EBIT	Q4 1988 EBIT	Q1 1989 EBIT	Q2 1989 EBIT	Q3 1989 EBIT	Q4 1989 EBIT	1988 EBIT	1987 EBIT	1986 EBIT
872	504	0	70	2,172	0	0	0	683	690	183
0.0%	50.4%	0.0%	7.0%	87.2%	0.0%	0.0%	0.0%	87.2%	87.2%	87.2%
0	504	0	70	1,829	0	0	0	848	429	139
0.0%	50.4%	0.0%	7.0%	80.4%	0.0%	0.0%	0.0%	50.4%	50.4%	50.4%
0	0	0	0	0	0	0	0	0	0	0
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
70	0	0	0	528	0	0	0	58	58	18
7.0%	0.0%	0.0%	0.0%	7.0%	0.0%	0.0%	0.0%	7.0%	7.0%	7.0%
1,246	1,183	1,068	1,068	4,067	1,068	1,068	1,068	1,506	1,038	343
124.6%	124.6%	124.6%	124.6%	124.6%	124.6%	124.6%	124.6%	124.6%	124.6%	124.6%
(246)	(224)	(210)	(210)	(784)	(210)	(210)	(210)	(318)	(206)	(88)
-24.6%	-24.6%	-24.6%	-24.6%	-24.6%	-24.6%	-24.6%	-24.6%	-24.6%	-24.6%	-24.6%
38	308	308	38	160	0	0	0	150	150	150
3.8%	30.8%	30.8%	3.8%	4.6%	0.0%	0.0%	0.0%	4.6%	4.6%	4.6%
0	189	189	0	0	0	0	0	0	0	0
0.0%	20.8%	20.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
38	38	38	38	160	38	38	38	150	150	150
3.8%	3.8%	3.8%	3.8%	4.6%	4.4%	4.4%	4.4%	4.6%	4.6%	4.6%
24	307	297	24	82	24	24	24	24	24	24
2.4%	30.7%	31.2%	2.4%	3.0%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%
307	307	277	277	1,006	591	591	591	496	496	381
30.7%	30.7%	27.7%	27.7%	33.1%	48.1%	48.1%	48.1%	48.7%	48.7%	38.1%
(333)	(333)	(333)	(333)	(31,063)	(31,063)	(31,063)	(31,063)	(3,202)	(3,202)	(3,448)
-33.3%	-33.3%	-33.3%	-33.3%	-31.0%	-31.0%	-31.0%	-31.0%	-31.3%	-31.3%	-31.3%
0	0	0	0	0	0	0	0	0	0	0
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0	0	0	0	0	0	0	0	0	0	0
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0	0	0	0	0	0	0	0	0	0	0
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0	0	0	0	0	0	0	0	0	0	0
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0	0	0	0	0	0	0	0	0	0	0
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0	0	0	0	0	0	0	0	0	0	0
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

