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PHASES, TASKS & MILESTONES -- WHAT IT ALL MEANS

by Dave Gilman

Lately there has been an awful lot pressure on development to supply information about components, phases, tasks, sub-tasks, milestones, development milestones...

Ever wonder what it's all about, if it's all worth while?

Well the Project Management group thinks it is. Also, our motivation is probably simpler than you suspect.

The injection of DeMarcoism that we all received last year would have us believe that an independent metrics group is needed to accomplish anything. How can we expect to make progress without maintaining data bases of information about past projects, tracking everyone's EQF, computing and correlating the standard deviation of the estimate versus the baseline versus the optimal...

Our goals are simpler.

First we define a component as a logical grouping of some functionality (e.g. doscalls, loader, engine). Then we need a way to compare the progress of components so we define a number of common tasks or phases that are (in theory) applied to all components (e.g. design, pseudo code, integration, function test). Given this simple partitioning we can communicate to upper management that, for example, the loader is being integrated, doscalls is in function test and all other components are in code review. Since these tasks are common it is much easier for upper management to keep track of

a project's progress.

Now if we were to follow this simple model we would (and did) rapidly find ourselves in trouble. This model says that everything needs to be completed before anything can be put together (very realistic - one delta the day before system test begins...). In order to inject a bit of reality, we define a number of intermediate milestones referred to as Development Milestones (DM): A DM is a functional (versus phase) description of progress. An example would be, load and execute 32-bit apps. These DMs allow us to monitor that work is being done in the order needed, to make visible, useful progress towards putting a system together.

The last step is to have developers tell us how they're doing. This is the feedback step which is what keeps a schedule dynamic.

The Base V1.3 group has (and will) put up with a number of iterations of this process. I appreciate their patience! The next steps are to apply this methodology for the development of all line items. After that, testing...

So, as I said, the goals are simple. Try and keep track of everything (who's doing what) in a consistent manner, update estimates with actuals (i.e. keep the schedule realistic) and keep weekends as planned activities!

If anyone wants more information about the types of schedule/modeling issues that we're trying to solve, come and speak with me.

ENQUIRING MINDS WANT TO KNOW

Information from Esther Dekker
For those of you who were wondering

The Hawaii trip will take place November 4th - 9th.

We will be leaving from Seattle EARLY Friday morning the 4th, using United and Northwest Orient Airlines. Our return to Seattle is set for midmorning on Wednesday, the 9th.

It is possible to extend your stay if you wish (and have managers permission). We will be staying at the Maui Westin, and they have made available to those extending their stay, the corporate rate of \$150.00 (plus tax) per night for three additional nights.

Remember if you are extending your stay or wish to make additional travel arrangements, Azumano Travel has special desk set up to handle your requests. Marty Voruez is the person assigned to our account and she can be reached at (800) 777-2018.

(If you will be extending your stay, please let me know also, as it will affect which airline you will be traveling on. Most people extending their time on Maui, will need to fly on Northwest Orient Airlines. Please let me know as soon as possible, the airlines need a passenger list by October 3rd.)

We will (hopefully) be in Hawaii during the Presidential election. I have absentee ballot applications in my office and if you plan on voting in the election, please stop by and pick one up.

That's it for now folks, look for more juicy details in next weeks edition.

ALOHA!!

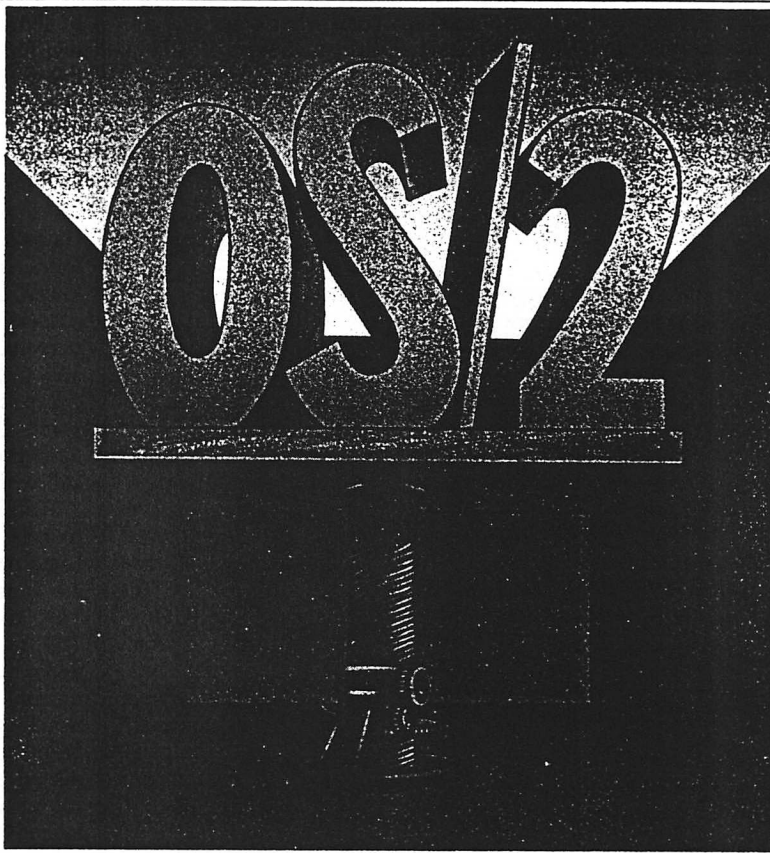
THE WAITING GAME THAT MICROSOFT CAN'T LOSE

Its new Operating System/2 is too hot for most desktops to handle—but that will change

In April, 1987, Microsoft Corp. unveiled the future. At the same time that IBM announced its new line of desktop computers, called Personal System/2, the No. 1 seller of personal-computer software introduced OS/2, a new operating-system software package for IBM PCs and their clones. Combined with powerful new microprocessors, the software promised to make desktop computers nearly as effective as mainframes for complicated computing tasks. At \$325 a copy, OS/2 was expected to sell faster than ice in July. Microsoft Chairman William H. Gates III predicted that by late 1989, OS/2 would "dominate" its field.

Sixteen months later, OS/2 still looks like a product of the future. Of the 6.6 million IBM PC-compatible machines sold this year that will be capable of using OS/2, only 10.6% will, according to market researcher Dataquest Inc. The rest will use MS-DOS, Microsoft's original operating system, the software that controls a computer's basic functions. Although Microsoft still sees a bright future for OS/2, it has pushed back the deadline for dominance to 1991. A few skeptics even have begun to suggest that OS/2 may never capture the world of desktop computing. Jeffrey Tarter, publisher of industry newsletter *Softletter*, argues that MS-DOS is powerful enough already. "The broad market will turn its back on OS/2," he predicts.

LITTLE INCENTIVE. The chances are that Tarter is wrong. For one thing, Microsoft promises to have unending patience until OS/2 catches on. Beyond that, it is busily trying to enhance OS/2's appeal by developing important new products



that work with it, such as a package of communications software designed for networks of personal computers. Still, the major software houses developing applications programs to go with OS/2, such as spreadsheet, word processing, or data-base software, are still a year or so from delivering products that fully exploit OS/2's power. Not until these programs are available will customers have a big incentive to buy OS/2.

In the meantime, there is considerable customer resistance. Corporations, which are expected to be the biggest buyers of OS/2, still aren't sold on its benefits. Part of the product's allure is its ability to perform so-called multitasking, a feature that lets a computer handle up to a dozen jobs at once. For instance, an executive could use a spreadsheet and monitor the stock market simultaneously. But "not many human beings can concentrate on that

many things at once," says Ruben Collazo, office automation coordinator at Mitsubishi International Corp. in New York. For now, Collazo says, he plans to stick with MS-DOS.

Other factors have muted another selling point for OS/2: its advanced graphics that mimic Apple Computer Inc.'s extremely popular Macintosh. The graphics version of OS/2, called Presentation Manager, won't be out until next month. And Microsoft was several months late in providing outside programmers with development tools to design programs that go with Presentation Manager.

For now, however, OS/2's biggest obstacle may be cost: It's more than twice as expensive as MS-DOS. More important, it requires a speedy microprocessor and lots

of internal memory. MS-DOS, written for an old family of microprocessors with little built-in memory, only lets applications programs use 640,000 bytes, or characters. That constrains a program's complexity and sophistication. OS/2 makes available virtually unlimited memory, enabling a computer to run more advanced applications programs.

To do that, however, OS/2 requires a PC with nearly four times the memory needed for MS-DOS. Most computers have one megabyte of memory, chips that store a million characters of information. A computer running OS/2 needs four megabytes. Adding that much memory costs about \$2,000 per PC, a major expenditure for a company that has thousands of machines. Moreover, partly because of that huge memory requirement, most manufacturers still sell MS-DOS, not OS/2, with their new machines.

Microsoft and IBM both are convinced

IBM HAS SEEN THE FUTURE— AND IT'S STILL THE FUTURE

Trading in futures is a risky business—in the commodities pits or the computer industry. IBM took a calculated risk that it could bolster its sagging lead in office PCs by selling customers on a promise. The Personal System/2 and its companion software, OS/2, would be the cornerstones of the next generation of personal computers. They'd be as easy to use as an Apple Macintosh—and a lot more useful in networks of PCs, mainframes, and minicomputers.

So far, however, the vision has been difficult to sell. By May, IBM says, it had sold 2 million PS/2s. But the company's market share has been slipping for a year—and in July, IBM's share of sales through U.S. computer dealers sank to its lowest point since Big Blue became a leading PC supplier, according to market researcher InfoCorp.

William C. Lowe, president of IBM's Entry Systems Div., says that those numbers don't tell the whole story since they exclude overseas sales, direct sales, and sales by distributors who add special software or hardware to IBM machines. "On a worldwide basis, we're gaining market share," he maintains. Market researcher Dataquest Inc., which tracks worldwide sales through all channels, disagrees. It predicts that IBM's share of the market for PCs selling for more than \$1,000 will drop this year to 18.4% from 19.2% last year. "The PS/2 hasn't been as well accepted as IBM had hoped," says Dataquest analyst Sharon Hashimoto.

IDENTITY CRISIS. What went wrong? Despite enthusiasm for IBM's view of the future, customers balked when it came to taking the plunge in the here-and-now. For one thing, "there was consistent confusion between PS/2 and OS/2," notes Thomas B. Holmes, product manager for Datapro Research Corp., which ran focus groups of PC buyers. "The two had been melded in their minds." So, even though PS/2s use existing PC software, some customers assumed that there was little reason to buy PS/2s before OS/2 applications software appears—probably late next year.

The major hardware innovation in

the PS/2, the "microchannel architecture," has also failed to draw customers. The microchannel is a technology for attaching far more powerful communications and graphics circuit cards than older PCs could handle. But few microchannel cards have been introduced that make PS/2s do anything very different from what older PCs do. AST Research Inc., a maker of add-in boards, had expected microchannel cards to account for half its add-in business by now. But Donald L. Williams, vice-president of AST's Enhancement Products Group, says they account for less than 20% of such sales.

Without obvious benefits from the microchannel or new software, "the only major selling point [for PS/2] now is speed," says Vic Leventhal, executive vice-president of ComputerLand Corp. "And there are lots of fast machines." Mainly, there are inexpensive clones of IBM's PC/AT, a machine that IBM discontinued in mid-1987.

Analysts say killing the AT to force the shift to the PS/2 was IBM's big blunder. The AT was still a best-seller when it was canceled, and continuing demand for AT-compatibles has boosted sales for Compaq Computer Corp. and dozens of IBM rivals. Meanwhile, the low-end PS/2 Models 25 and 30, descendants of the original PC, are lagging. "In business, those models aren't going to cut it," says InfoCorp analyst David A. Carnevale. First Boston Corp. analyst Charles R. Wolf figures that IBM could have sold as many as 1 million ATs in the past year. That could have meant up to \$500 million in pretax earnings, he says.

Now IBM wants to recoup some of that money. Later this month it is expected to come out with an upgraded PS/2 Model 30 that includes the Intel Corp. 80286 microchip used in PC/ATs, but not the microchannel. Although it sounds like an AT, IBM disagrees, pointing to a major design difference. "This doesn't equate with going back to the AT-type machine," insists Lowe. Still, it may be one way to win back market share while customers mull the future IBM plans for them.

By Geoff Lewis in New York, with Maria Shao in San Francisco



that once customers get a glimpse of multitasking, they'll convert. "In a few years we're going to be incredulous that we ever thought we didn't need it," says William P. Lyons, vice-president for software marketing at IBM. The acid test will begin with this fall's shipment of OS/2 with Presentation Manager. Like the Macintosh, Presentation Manager works with a point-and-click "mouse." It also has overlapping windows and small pictures to represent commands.

CHEAP MEMORIES. In the long run, Gates is banking on the increasing popularity of extremely powerful personal computers, on which OS/2 works best, to boost sales of the software. By next year nearly half of all desktop computers sold will use Intel Corp.'s latest microprocessor, the 80386. And in the meantime, semiconductor companies are adding capacity to ease the current chip shortage. By Gates's target year of 1991, the cost of extra memory should be substantially lower. By then, says John F. Thorlin, an associate director at Dataquest, most personal computers that are sold will be able to run OS/2. "By 1992, it will be as cheap to run OS/2 as DOS." At that point, OS/2 may replace MS-DOS as the operating system that manufacturers sell with their new machines.

Waiting that long for a payoff is likely to cost the Redmond (Wash.) company some profits. In the fourth quarter, ended June 30, Microsoft's earnings rose 74%, to \$30 million, and sales jumped 71%, to \$170.5 million. For the year, revenues were \$591 million, earnings \$124 million. Still, Microsoft's stock dropped nearly 4 points, to 58, in the two days following the news, because analysts expected even better results. It's now trading at about 51. The analysts had overlooked the fact that operating system sales weren't growing as fast as sales of applications programs, whose pretax margins are several points lower. "The whole key to margins is OS/2," says Microsoft President Jon A. Shirley.

In a way, Microsoft can't lose. Should OS/2 falter, MS-DOS will pick up the slack. And MS-DOS is very profitable, with pretax margins at 37%, says David G. Bayer, an analyst at Montgomery Securities Inc. in San Francisco. Still, rather than sitting on its past success, Microsoft intends to forge ahead, says Steven A. Ballmer, Microsoft's vice-president for systems software. OS/2's potential is huge: Ballmer estimates that 10 million IBM PCs or clones are sold every year. Microsoft already has spent some \$30 million on OS/2 development and marketing. And it will spend millions more. OS/2 "is the key future technology," Gates says. "We're patient people. All the progress is in the right direction."

By Richard Brandt in Redmond, Wash., with Katherine M. Hafner in New York