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FINANCIAL APPLICATIONS SERIES

BUDGETING AND PROFIT PLANNING ON THE HP3000

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Good morning. Today I'm going to talk about budgeting and
profit planning on the HP3000. This discussion will be
organized around a specific example, but will not be limited
to it. This is a very subjective discussion. There is cer-
tainly plenty of room for conflicting opinions. And there
are many ways of putting together plans which are different
from the example being presented here.

How many of you in the audience have the primary respon-
sibility for budgeting or profit planning in your company?
How many of you are in your company's data processing department?
How many of you get no closer to profit planning than putting
together your own budgets?

I hope that when this discussion is finished, that as a "D.P.
person" you get a little better idea of what overall company
planning is, and where your own budgeting and forecasting
fits into it. As a "financial planner", I hope that you will
leave with a better understanding of how the HP3000 can con-
tribute to your own company's planning.

My discussion will proceed as follows: First, some gener-
alities about planning. The use of the HP3000.
A brief comparison of high-level financial planning lang-
uages versus manual or programmed models. Then I will
discuss a typical plan.

First, a definition.
When I talk about planning, I will be speaking specific-
ally about company (or corporate) planning. Product fore-
casting, departmental budgeting, and financial projections.
Deciding where funds are to be spent, and analysing the impact
of these expenditures.

There is a myth: That one can build a "model" of a
company which can be mathematically manipulated to make
"optimal" use of resources and maximize achievement of
company goals. That this model needs to be complicated, and
is incomprehensible to mere mortals. It is true that one
could formulate a "model" of a company where the goal is to
maximize profit or cash flow, with constraints involving
debt-to-equity ratios, market penetration, production capa-
city, etc. But because of how little we actually know about
the future, and how much uncertainty there is about it, to
build a sophisticated model which "optimizes" the results of
a business, is ridiculous. It would be fooling ourselves
about how little we actually know.

There is reality: What planning really is, is sitting down and
accepting that there is much uncertainty about the future.
But at the same time, in order for us to be somewhat prepared
for that uncertain future we must make assumptions. Best
guesses about what may happen. One of the most important

results of the planning process is to get managers
together and come to a general agreement as to how company
goals are to be achieved. In a nutshell, planning is sit-
ting down with marketing and production planning people
and getting a "best guess" product forecast. Getting respons-
ible managers to commit to realistic levels of spending
within their departments. Create a plan of action which
represents a generally agreed-upon approach to the direction
of the business.

While it may be uncertain, a good plan at least makes it
possible to rule out the "unlikely" or "infeasible" situation
which might result from "seat-of-the-pants" guesses:

   - Growing too fast to be supported by available funds
   - Spending too much money to have any left over
   - Selling more product than can be produced
   - Producing more product than can be sold

So, I am going to talk about reality. Putting together a
plan, what it means, and how the HP3000 can be used as an
effective tool in getting the job done.

THE TOOLS: An HP3000 computer system, available for both
batch and interactive use. Most of our customers use in-house
(rather than dial-up) systems. They use both on-line CRT's
and printing terminals, and most have access to a near-by
line printer. The system is almost always accessible to the
responsible manager, although some companies distribute only
the reports and not the computer interaction as well. The
system is used interactively for setting up reports and re-
viewing the results on a particular report. Reports are
run in the batch mode for making multiple copies, generating
a whole sequence of reports at once, and sometimes just for
hard-copy output.

A high-level planning language. We work with our proprietary
financial planning language, Dollar-Flow, and it will be used
to illustrate the examples here. We choose to work in a
"high-level language" like Dollar-Flow because:

   - Planning by hand (and calculator), despite the flexib-
     ility it provides, takes too much time, involves too
     many opportunities for error, and is particularly
     undesirable when doing many iterations of a plan.
   - Planning on a computer using a "procedure level"
     language like BASIC, FORTRAN, or COBOL takes too
     long to set up, is inflexible, and requires the
     services of a programmer.

Dollar-Flow, because it is designed for planning, enables us
to focus on the problem itself, without paying particular re-
gard to all the details of what is actually going on in-
side the computer.

THE PLAN: A typical financial plan might involve the follow-
ing modules:

- A sales forecast
- Budgets and budget consolidations
- A profit/loss projection
- A cash flow projection
- A balance sheet projection

Most of the plans which we get involved with work on a three
to five year horizon with (of course) particular attention
being paid to the first year. For the first two years the
plan usually is done by month, whereas the third through
fifth year projections might be by quarter, by half, or on
an annual basis.

SALES FORECAST: Preparing the sales forecast is the first
step in profit planning. Today I am not going to go into the
any techniques which can be used for forecasting. Rather, I
am going to concentrate on the techniques we use for working
with forecast figures which have been decided upon (in one
way or another) by those responsible for the forecast.
The sales forecast is the most important as well as the most
uncertain part of the planning process. Since sales de-
termine how much money is available for budgets, etc., the
forecast is prepared first. And because of the uncertainty
of our projections, we may re-run our plan several times with
varying levels of sales as a "what-if" analysis. So we can
do contingency planning.

A forecast for a product-oriented company is usually done
first on a "bottoms-up" basis. That is to say, on a product-
by-product basis. If we are building a plan with a three or
five year horizon, the third through fifth years may only be
overall sales dollars estimates. In the near term, however,
the sales forecast is done by month for each product. In
addition to the unit sales forecast, we need an average
selling price on each product (which may vary over time),
which we will show as one value here. And to enable us to
generate figures for the cost of sales, we combine this data
with estimates of direct labor per unit, direct material per
unit, and manufacturing overhead (which may or may not be on
a per-unit basis). The sales revenue and cost of sales
forecast then is simply a product of the unit sales project-
ions and the per unit price and cost factors. A typical
product forecast might look like the following:

XYZ COMPANY   PAGE
                                  SALES FORECAST REPORT

	AVG SELLING PRICE	DIRECT LABOR/ UNIT	DIRECT MATL/ UNIT	MFG OVHD/ UNIT
1 WIDGETS.............	900	85	200	255
2 GIZMOS..............	1,300	155	275	465
3 THINGS..............	1,950	175	375	525
4 NON-THINGS.........	2,100	575	525	1,725
5 ZITHERS............	2,450	560	450	1,680

	JAN UNITS	JAN REV	JAN DL	JAN DM	JAN OVHD
1 WIDGETS.............	100	90,000	8,500	20,000	25,500
2 GIZMOS..............	50	65,000	7,750	13,750	23,250
3 THINGS..............	-	-	-	-	-
4 NON-THINGS.........	25	52,500	14,375	13,125	43,125
5 ZITHERS............	-	-	-	-	-
6 TOTAL ALL PRODUCTS.	175	207,500	30,625	46,875	91,875

Now, a top-down analysis may be done on the total sales figures
in each period (or by year) and feedback on the unit forecasts
if they are too high (or low).

In businesses which build product to inventory (where sales
and production levels may be very different in a given period),
a manufacturing plan is required in addition to the sales
forecast. That is to say, once the sales forecast has been
prepared, then the production planners must sit down and de-
termine a production plan which will meet an objective level
of delivery of product and reasonable levels of inventory,
given the sales forecast. The production plan would be
similar to the unit sales forecast - it is simply the units
to be produced by period. The result of the production plan is
actual outlays for direct material and direct labor (which
go into inventory). Combined with the cost of sales (what
comes out of inventory) this gives us the change in invent-
ories. A typical production plan might look like the following:

		JAN	FEB	MAR	APR	MA
6	TOTAL SALES................	207,500	207,500	207,500	467,500	461,00
7	TOTAL COGS LABOR........	30,625	30,625	30,625	53,000	52,22
8	TOTAL COGS MATL.........	46,875	46,875	46,875	96,250	94,87
9	TOTAL COGS OVHD.........	91,875	91,875	91,875	159,000	156,67
10	TOTAL COGS...............	169,375	169,375	169,375	308,250	303,77
11	WIDGET UNIT PRODUCTION..	100	100	100	100	10
12	GIZMO UNIT PRODUCTION...	50	50	25	20	1
13	THING UNIT PRODUCTION...	–	50	100	150	15
14	NON-THING UNIT PRODUCTION.........	25	25	25	25	2
15	ZITHER UNIT PRODUCTION..	–	–	–	–	1
16	TOTAL PRODUCTION (AT ASP).....	207,500	305,000	370,000	461,000	472,50
17	TOTAL PROD LABOR........	30,625	39,375	44,250	52,225	56,27
18	TOTAL PROD MATL.........	46,875	65,625	77,500	94,875	96,62
19	TOTAL PROD OVHD.........	91,875	118,125	132,750	156,675	168,82
20	TOTAL PROD LABOR,MATL,OVHD....	169,375	223,125	254,500	303,775	321,72
21	PROD MATL PURCHASES.....	77,500	94,875	96,625	131,625	130,25
22	INITIAL INVENTORY.......	125,000				
23	BEGINNING INVENTORY.....	125,000	155,625	238,625	342,875	375,15
24	INVENTORY CHANGE........	30,625	83,000	104,250	32,275	51,57
25	ENDING INVENTORY........	155,625	238,625	342,875	375,150	426,72

* END OF $FLOW$ REPORT *

Now, we are not finished with the forecast. One is never
finished with the forecast. But with it set up in our
planning system as we are doing here, when the forecast
figures change, we can re-run our model and get a revised
company plan with a minimum of effort.

The next step is budgeting (which may overlap with the
forecasting step). The forecast is important to the budget-
ing step because it tells us how much is available to be
spent in the budget. In other words, the budgets may need
to be revised as the forecast changes.

A few comments about the typical budget environment.
-   There is usually a budgeting hierarchy, where there
are several levels of consolidation. Budgets may be
grouped at sub-department, department, product line,
division, or many other levels.
-   In addition to the consolidation hierarchy, there
may be service departments (or locations) which charge
some costs out to other departments (data processing
for example).

A typical budgeting hierarchy might have the following
levels:

> Overall company budgeted expenditures

> Divisional consolidated budgets

> Product line consolidated budgets

> Departmental budgets

> Location budgets (within a department)

Service location budgets

Now, the budget reports we usually set up identify each bud-
getary item by general ledger account number and description.
For most of the items on the budget, the system prompts for a
value to be input for each period on the budget (typically the
periods are months) and allows for revisions to be made by row
and/or column. Typical input lines are:

1001 WAGES & SALARIES
3001 SUPPLIES
5002 COMPANY AUTO
5003 ENTERTAINMENT

Some budget items are functions of other items. For example,
fringe benefits may be set up as 20% of wages and salaries:

1002 FRINGE BENEFITS = .20 X '1001 WAGES & SALARIES' ;

The total budget may be calculated using the 'SUM' function of
Dollar-Flow:

TOTAL BUDGET = SUM('1001 WAGES & SALARIES','9999 MISC EXPENSE');

And some budget items may use figures allocated from other
budget locations:

```
3005 EDP EXPENSE =
     '% EDP ALLOCATION' X 'TOTAL BUDGET' OF 'D9000'/100;
```

A typical budget plan might look like:

			JAN	FEB	MAR	APR	MAY
1	1001	WAGES & SALARIES	5000	5000	5000	10000	10000
2	1002	FRINGE BENEFITS	1000	1000	1000	2000	2000
3	1003	PAID VACATION	100	100	100	200	200
4	1004	SICK PAY	150	150	150	300	300
5	3001	SUPPLIES	500	500	500	500	500
6	3005	EDP EXPENSES	800	800	800	1200	1200
7	5001	TRANSPORTATION FARES	2000	2000	2000	2000	2000
8	5002	COMPANY AUTO	500	500	500	500	500
9	5003	ENTERTAINMENT	500	500	500	500	500
10	8001	ADVERTISING	1000	1000	5000	2000	2000
11	8002	PROMO LITERATURE	2500	2500	2500	2500	2500
12	8003	TRADE SHOWS	10000	-	-	20000	-
13	9999	MISC EXPENSE	500	500	500	500	500
			-------	-------	-------	-------	-------
14		TOTAL BUDGET	24550	14550	18550	42200	22200
15		% FRINGE	20.0 %				
16		% EDP ALLOCATION	8.0 %				

* END OF $FLOW$ REPORT *

By having allocated expenses defined within our planning
system as automatically flowing into each of the using loca-
tions, it is easy for us to keep all of the budgets con-
sistent. Whenever the budget for a service department (such
as EDP) is revised, the new figures flow into the departments
using their services the next time those budgets are run.

One more comment about the system we are using. Within
Dollar-Flow, information is organized on a report basis. That
is to say, users work with one report at a time and do not
have to concern thenmselves with the distinctions between
reports, files, programs, and data. And reports are saved
on the HP3000 under 8 character MPE file names so they
referenced by other reports and/or re-run at some later time.

We usually organize the budget reports according to the customer's own scheme for identifying budget locations, by saving these reports with meaningful names. For example, if the EDP department has a location code number of 9000, then we might save the budget for that department under the name 'D9000'. Sub-departments locations might be coded 'D9001', 'D9002', etc. A budget which is a consolidation of other departments might be stored with a descriptive name like D900' or 'D900X'. With a numbering scheme which groups various budgets into group names which can be accessed using @, #, and ? symbols (according to the MPE file referencing convention), indirect file references can be used to set up the structure of a budget hierarchy. In other words, we could define a consolidation report as summing 'D900#' which would automatically add up 'D9001' through 'D9009'. Budget consolidation reports usually have the same format as the lower-level reports they reference.

A few comments about the budgeting process. In our experience we have seen great diversity in how companies do their planning. Some companies centralize budget preparation. Distributing budget worksheets, then inputting the data and making revisions in one area. Other companies distribute the entire process, letting managers interact directly with the budget system, only processing the data when it is ready for consolidation. Some companies budget in great detail. Others take the "big picture" approach, working at higher levels of consolidation. The one thing that all of the companies which we have worked with have in common, is that the budgeting process involves many changes and several iterations. With several levels of consolidation, and allocations from several service departments, budgeting would be a massive job if it were done by hand. And a massive headache if it were done with the traditional programming approach in BASIC, FORTRAN, or COBOL.

Once the budgets have been prepared, we are ready to proceed with the profit/loss projection. With the information provided by the sales forecast and manufacturing plan, plus the departmental budgets, the P & L is little more than a recap of existing information. This is particularly easy in the system which we are using because we can 'define' relationships on our P & L report which will cause data to be read automatically from reports which have already been prepared. For example, we could read information from the manufacturing plan with rules like the following:

DIRECT LABOR = 'TOTAL COGS LABOR' OF 'MFGPLN' ;
DIRECT MATL = 'TOTAL COGS MATL' OF 'MFGPLN' ;

where 'TOTAL COGS LABOR' and 'TOTAL COGS MATL' are lines on the production plan which has been set up and saved under the name 'MFGPLN'.

We can even reference several reports for a one-line consoli-
dation:

MARKETING = 'TOTAL BUDGET' OF ('D2001','D2002',...,'D2009');

Of course the one-line consolidation shown here would only be
necessary if we didn't have a consolidation report already
set up for total marketing.

A few of the lines involve calculations with other lines on the
P & L report itself:

TOTAL DIRECT COST = 'DIRECT LABOR' + 'DIRECT MATL' + 'MFG OVHD' ;
GROSS MARGIN = 'SALES' - 'TOTAL DIRECT COST' ;

And one line, 'INTEREST EXPENSE', is a forward reference to two
other lines yet to be defined:

INTEREST EXPENSE = '% INTEREST' X 'OUTSTANDING DEBT' / 1200 ;

Now, the P & L projection (combined with the cash flow) is
usually run as soon as the first pass forecast and budget reports
are ready. The budgets and the forecast are then red-lined, and
sent back for revision. The revisions may involve changes in
budgeted expenditures, pricing (and volume) of products, or even
timing of product introduction and related expenditures. The
running of the P & L and the cash flow is then the "top-down"
step in planning, where the forecasts and budgets are revised
based on overall criteria.

A typical P & L projection might look like the following:

XYZ COMPANY   PAGE
                  PROFIT/LOSS AND CASH FLOW PROJECTION

		JAN	FEB	MAR	APR	MAY
1	PROFIT/LOSS PROJECTION:					
2	SALES	207.5	207.5	207.5	467.5	461.0
3	DIRECT COSTS:					
4	DIRECT LABOR	30.6	30.6	30.6	53.0	52.2
5	DIRECT MATL	46.9	46.9	46.9	96.3	94.9
6	MFG OVHD	91.9	91.9	91.9	159.0	156.7
7	MFG OVHD VARIANCE	(1.9)	(28.1)	(42.8)	13.3	1.2
8	TOTAL DIRECT COST	167.5	141.3	126.6	321.6	305.0
9	GROSS MARGIN	40.0	66.3	80.9	145.9	156.1
10	ENGINEERING	25.0	25.0	25.0	35.0	35.0
11	MARKETING	24.6	14.6	18.6	42.2	22.2
12	GEN & ADMIN	25.0	25.0	25.0	25.0	25.0
13	TOTAL PERIOD EXPENSE	74.6	64.6	68.6	102.2	82.2
14	OPERATING PROFIT	(34.6)	1.7	12.3	43.7	73.9
15	INTEREST EXPENSE	.9	2.0	–	–	2.3
16	NET INCOME BEF TAX	(35.5)	(.3)	12.3	43.7	71.6
17	TAXES ON INCOME	–	–	–	9.8	34.4
18	NET INCOME AFTER TAX	(35.5)	(.3)	12.3	34.0	37.2

For companies where cash flow is important (because they are
growing rapidly, because margins are low, or a host of other
reasons), the cash flow projection may be the most important
part of the planning cycle.

Now, setting up a cash flow projection from the information we
already have available requires little more than taking our P & L
results and adjusting them for timing in the flow of funds.
Let's start this with a very simplified rule of thumb. The dif-
ference between profit and cash flow is that:

PROFIT (like your salary) is what you pay taxes on, whereas
CASH is what you have in the bank.

And we all know what a big difference that can be! Let's examine
two important examples. If a company sends a shipment to a cus-
tomer along with a bill for the goods, then the amount of the
bill (less the cost of making the goods) is profit. However,
all the company who shipped the product has at this point is a
thing called "accounts receivable", or money owed to it by the
customer which has not yet been paid. This becomes cash only
when the customer pays his bill. Conversely, when a company
takes delivery of goods on credit from a vendor, the amount owed
to the vendor ("accounts payable") only becomes a cash outflow
when the bill is paid. In both of these cases, cash will even-
tually change hands to offset accounts receivable and accounts
payable. However, the timing makes a big difference in cash
flow. And, keep in mind, running a business at a loss (although
undesirable) is not nearly as serious as running out of money
(and unable to borrow it somewhere)! If a company is growing
fast, it is very easy to run out of cash even though the busi-
ness is very profitable.

Enough of the generalities. Let's look at what we do to create
our cash flow. First, the "aging" of accounts receivable, or
reflecting how cash payment of accounts receivable is expected
to occur over time. We usually calculate a 3 month moving aver-
age of sales, then use an estimate of the number of days of sales
that will be in accounts receivable at one time. We set up this
number of days sales figure as an easily revised input value so
that the plan can be run at varying rates of receivables collec-
tion. Combining the average sales with the number of days sales
which are in accounts receivable, we project the ending accounts
receivable balance for each month. With this information, all
we have to do is a calculation with the following rule to deter-
mine cash receipts:

RECEIPTS = 'BEGINNING A/R' + 'SALES' - 'ENDING A/R' ;

The report lines appear as follows:

	JAN	FEB	MAR	APR	MAY
21 CASH FLOW PROJECTION:					
22 RECEIVABLES AGING:					
23 PRIOR 2 MOS SALES	180.0	190.0	-	-	-
24 3 MOS AVG SALES	192.5	201.7	207.5	294.2	378.7
25 # DAYS SALES IN A/R	45.0	45.0	45.0	45.0	45.0
26 BEGINNING A/R	300.0	288.8	302.5	311.3	441.3
27 CHANGE IN A/R	(11.3)	13.8	8.8	130.0	126.8
28 ENDING A/R	288.8	302.5	311.3	441.3	568.0
43 RECEIPTS	218.8	193.8	198.8	337.5	334.3

For accounts payable, the process is a little more involved.
We take the total budgeted expenditures for all of the operat-
ing departments and subtract out the payroll and depreciation
expenses from them. We add into this direct material purchases
and capital equipment purchases. This gives us the amount of
accounts payable we have incurred. Then, we assume that all of
our bills are paid in 30 days (or 1 period in the example here).
So we just take the prior period's accounts payable to determine
our payment of accounts payable in the current period. To han-
dle the first period, we add a figure for accounts payable in-
curred in the preceding period. This analysis appears as follows:

```
29 PAYABLES AGING:
   ----------------
30 BUDGETED EXPENSES                164.6   154.6   158.6   272.2   252.2
31 PAYROLL                           50.0    60.0    65.0    75.0    80.0
32 PAYROLL (EXCL D.L.)               19.4    20.6    20.8    22.8    23.7
33 DEPRECIATION                       7.0     7.0     7.0     7.0     7.0
34 MATERIAL PURCHASES                77.5    94.9    96.6   131.6   130.3
35 CAPITAL EQUIPMENT PURCHASES          -       -       -   200.0       -
36 ACCTS PAYABLE INCURRED           215.7   221.8   227.4   574.1   351.7
37 PRIOR PERIOD A/P                 190.0
38 ACCTS PAYABLE PAID               190.0   215.7   221.8   227.4   574.1
```

For interest payments, we assume that they are paid in the per-
iods that they are incurred. (We will discuss the interest cal-
culation in somewhat greater detail in a moment.) And taxes are
usually paid based on the results of the prior year. In the
example here, we have assumed that no taxes were due in the
preceding year.

Now, to calculate the cash flow in each period, all we do is to
take the receipts and subtract the total of payroll, accounts
payable paid, taxes paid, and interest paid. This gives us our
net cash flow from operations in any given period.

```
42 CASH FLOW:
   ==========
43 RECEIPTS                         218.8   193.8   198.8   337.5   334.3
44 DISBURSEMENTS:
45 PAYROLL PAID                      50.0    60.0    65.0    75.0    80.0
46 ACCTS PAYABLE PAID               190.0   215.7   221.8   227.4   574.1
47 TAXES PAID                           -       -       -       -       -
48 INTEREST PAID                       .9     2.0       -       -     2.3
                                   ------  ------  ------  ------  ------
49 TOTAL DISBURSEMENTS              240.9   277.6   286.8   302.4   656.3
                                   ------  ------  ------  ------  ------
50 NET CASH FLOW                   (22.2)  (83.9)  (88.1)   35.1  (322.1)
```

Next, we consider financing. As shown here, we have constructed
a model which takes the beginning balance of cash in a given
period and adds into it the changes in cash due to operations.
Equity financing is then added into the cash balance. Then, we
set up a rule for the line 'BORROWING (REPAYMENT)' which says
"If the cash balance is less than zero, borrow enough money to
bring the balance back to zero. If the cash balance is greater
then zero, then pay off any existing debt with whatever cash is
available." We then add this borrowing or repayment into our
cash balance and we have ending cash for the period. The
financing lines appear as follows:

51 BEGINNING CASH	50.0	–	–	105.9	141.0
52 CHANGES IN CASH	(22.2)	(83.9)	(88.1)	35.1	(322.1)
53 ENDING CASH	27.8	(83.9)	(88.1)	141.0	(181.1)
54 FINANCING	–	–	350.0	–	–
55 BORROWING(REPAYMENT)	(27.8)	83.9	(156.0)	–	181.1
56 ENDING CASH AFTER FINANCING	–	–	105.9	141.0	–
57 BEGINNING DEBT	100.0	72.2	156.0.	–	–
58 OUTSTANDING DEBT	72.2	156.0	–	–	181.1
59 % INTEREST PAID	15.0 %	15.0 %	15.0 %	15.0 %	15.0 %

One last comment about the cash flow. The 'INTEREST EXPENSE'
line on the P & L statement is calculated using the '% INTEREST
PAID' and 'OUTSTANDING DEBT' lines on the cash flow. The system
which we are using actually solves the circular logic involved
in calculating interest, cash flow, and debt, so that these
values are all mutually consistent.

The last step in our profit plan is the creation of a balance
sheet. Similar to the P & L statement, the balance sheet is
usually just a recap of the P & L and cash flow projection. I
won't say much about the balance sheet, except to mention that
we use it as a tool to make sure that our cash flow projections
are working correctly. If our assets are equal to our liabili-
ties (as they should be), then we can be pretty sure that we
haven't made a mistake in the general logic of the cash flow (of
course the values could still be wrong!). The balance sheet
might appear as follows:

BALANCE SHEET PROJECTION

		DEC	JAN	FEB	MAR	APR	MAY
1	ASSETS:						
2	CASH	50.0	–	–	105.9	141.0	–
3	ACCTS RECEIVABLE	300.0	288.8	302.5	311.3	441.3	568.0
4	INVENTORY (NET)	125.0	155.6	238.6	342.9	375.2	426.7
5	TOTAL CURRENT ASSETS	475.0	444.4	541.1	760.0	957.4	994.7
6	PROP, PLANT & EQUIP	2255.0	2248.0	2241.0	2234.0	2427.0	2420.0
7	TOTAL ASSETS	2730.0	2692.4	2782.1	2994.0	3384.4	3414.7
8	LIABILITIES AND NET WORTH:						
9	ACCTS PAYABLE	190.0	215.7	221.8	227.4	574.1	351.7
10	TAXES PAYABLE	–	–	–	–	9.8	44.1
11	S.T. BANK LOAN	100.0	72.2	156.0	–	–	181.1
12	TOTAL CURRENT LIABILITIES	290.0	287.8	377.8	227.4	583.8	576.9
13	L.T. BANK LOAN	900.0	900.0	900.0	900.0	900.0	900.0
14	TOTAL LIABILITIES	1190.0	1187.8	1277.8	1127.4	1483.8	1476.9
15	STOCKHOLDERS EQUITY:						
16	COMMON STOCK	2340.0	2340.0	2340.0	2690.0	2690.0	2690.0
17	RETAINED EARNINGS	(800.0)	(835.5)	(835.7)	(823.4)	(789.4)	(752.2)
18	TOTAL STOCKHOLDERS EQUITY	1540.0	1504.5	1504.3	1866.6	1900.6	1937.8
19	TOTAL LIABS & WORTH	2730.0	2692.4	2782.1	2994.0	3384.4	3414.7
20	ASSETS – LIABS	–	–	–	–	–	–

* END OF $FLOW$ REPORT *

This completes our profit plan. I want to emphasize here that
the example we have used is not a fixed or canned example. De-
pending on the way in which our customers think of their projec-
tions, we may alter the rules for the P & L, cash flow, and
balance sheet projections. And in most cases, the forecast re-
ports and budgets are tailored to conform to the customer's own
products and chart of accounts. The main idea here, however, is
that we have a framework in which we set up analyses. Then, as
required, we make changes taking advantage of the flexibility of
the planning language which we are using.

Setting up a realistic plan is an excellent first step in managing a fast-moving business effectively, but it is only a beginning. What really counts is putting it into action. So, once a plan is established, then actual performance against it must be monitored. This can be done with a combination of budget variance reports, forecast versus actual sales reports, and comparisons of P & L, cash flow, and balance sheet position. In some cases, we set up variance reports within the Dollar-Flow system for this reporting. In other cases, we feed the projections which have been set up in Dollar-Flow into other reporting systems.

Let me summarize what we have covered here. Our overall company plan has encompassed a product-by-product forecast with a matching production plan to establish what we expect to produce and sell. We have established budgets which set the spending for various areas of responsibility in the company. And we have set up a profit/loss statement, cash flow projection, and balance sheet projection to examine the impact of the forecast and budgets, analyze alternative financing and management strategies, and to review the company operations on an overall basis.

I hope we have eliminated some of the mystery and myth which surrounds the concepts of financial planning and cash flow analysis. Building an effective profit plan for a company is not a trivial task, nor is it an impossible one. We feel that it is an excellent opportunity to use the computer as a tool, but at the same time is not a good data processing application. Because of the demands in planning for flexibility, immediate feedback, ease of use, and good documentation, it is simply too difficult to set up good models in languages like COBOL, BASIC, or FORTRAN. With a good financial planning language, however, the HP3000 can be a very powerful tool for budgeting and financial planning.

Thank you very much. Do you have any questions?

PRACTICAL INTERACTIVE SYSTEMS

FOR MATERIALS REQUIREMENTS

PLANNING

BY:

David Sohm

SECTION 14