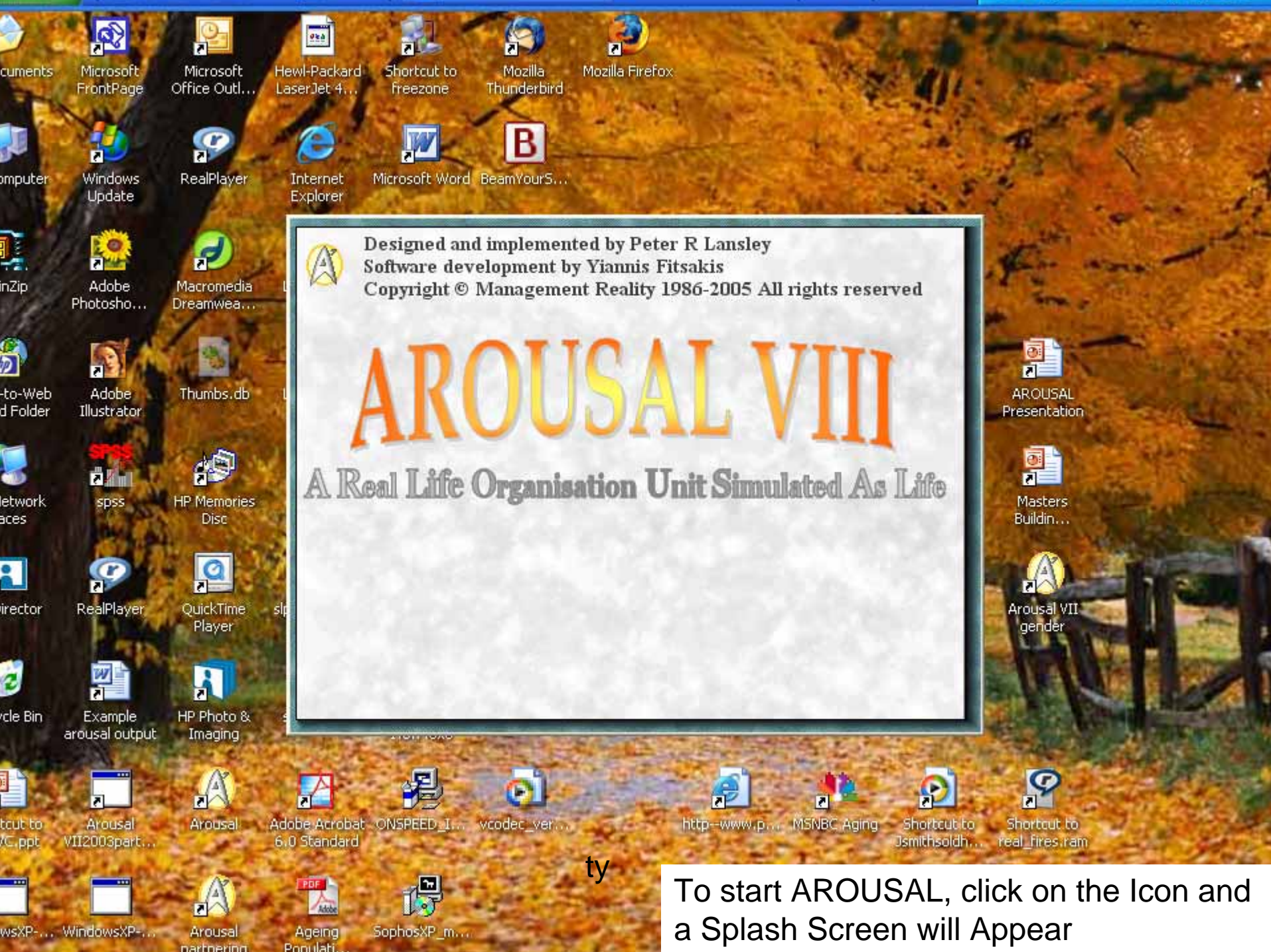



The AROUSAL Simulation System

A Quick Tour of some of the
Screen Displays and
Simulation Output

Renzo Construction Company

- This is a small company located near Boston.
- It specialises in refurbishment work, especially offices. These are small and rapidly executed.
- It is seeking to become involved with more conventional projects.
- It's not really geared up for this development, so needs your help.
- You will take over for the first quarter of 2006.
- The information and simulation system will provide you with information and will process your decisions.




Designed and implemented by Peter R Lansley
Software development by Yiannis Fitsakis
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AROUSAL VIII

A Real Life Organisation Unit Simulated As Life

ty

To start AROUSAL, click on the Icon and a Splash Screen will Appear



Renzo Corporation

Boston, Massachusetts

Dear Sir/Madam,

Thank you for agreeing to help the Renzo Corporation develop one of its subsidiaries, Renzo Construction Company. This is a small building firm based in Woburn, near Boston. Renzo Construction started out in the mid 1960s as an internal building department to service the needs of the Renzo Corporation, a growing conglomerate. Three years ago, as a result of pressure from the managers in the department, the Corporation decided that the department should become a separate entity.

Subsequently the annual volume of Renzo Construction has more than doubled. This expansion has come from an increase in renovation work, traditionally the staple diet of the firm, and from the firm's entry into more conventional markets for new types of project. The growth would have been greater, but because of the change in status, the parent company decided that Renzo Construction should compete for all internal work. As a consequence of growth and development the firm has changed, yet it is still managed as if it were a small job shop. It has not sought larger contracts, its overheads are too high and it is barely profitable. The resulting performance has been disappointing. This is where you are required!

The company's management needs to be put on a more professional footing. I am looking to you to suggest ways to organize the firm, market its business and tighten-up its finances. Of particular concern to me is its market base, this is predominately local and its projects are too small. The need to enter new markets is even more important. The influence of the Corporation has declined. The company has to make its own way in the world.

I have attached a few notes on the firm. Further background information and a description of the company's information systems are also attached. Take a good look at these before you start work with the company. Best wishes! I look forward to seeing the company thrive. Sincerely yours,

The President,
Paul Mason

Proceed

Do not show me this dialog again

You are invited to run the company.
Click on Proceed



The system is menu driven



It uses Icons



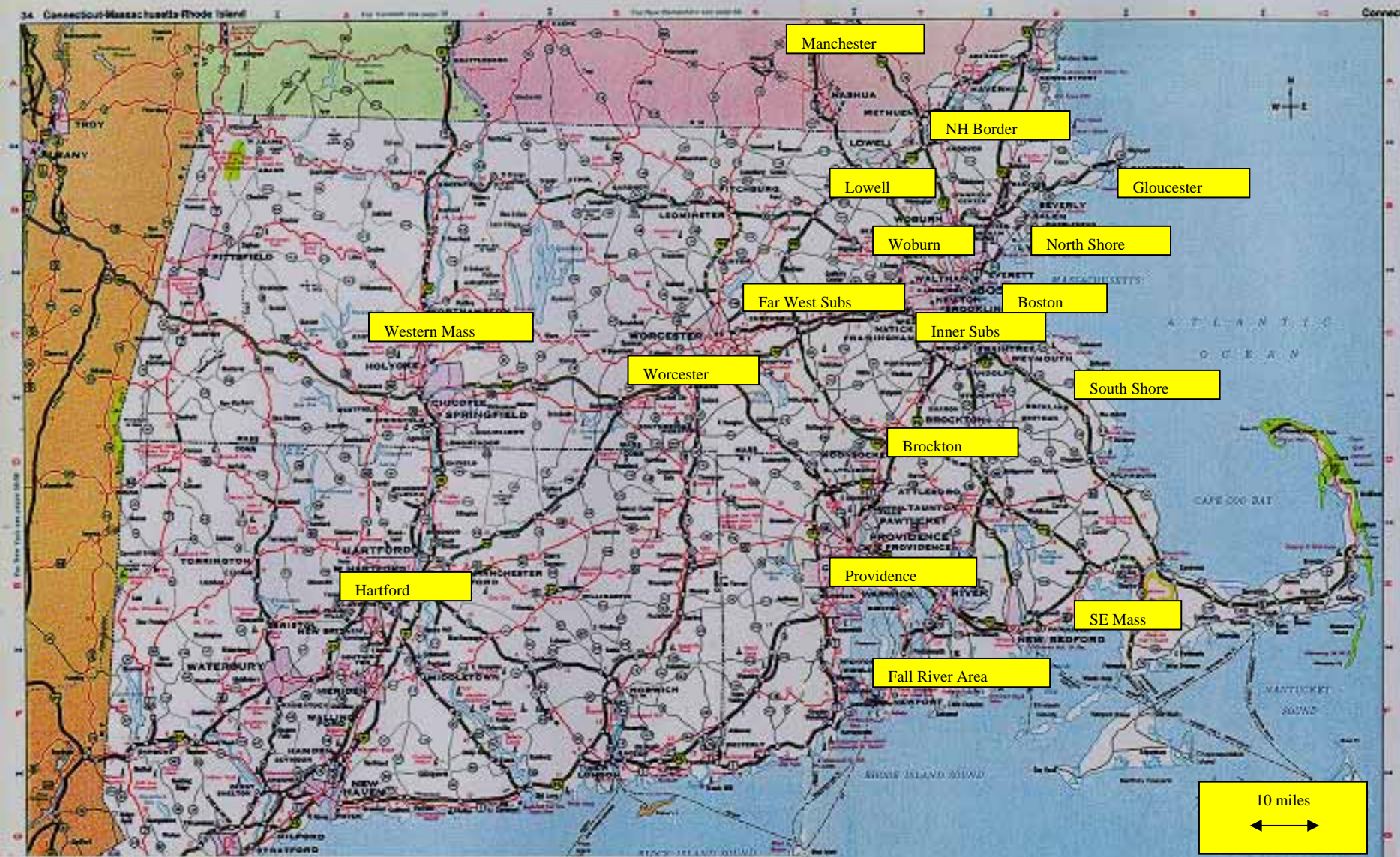
and drop down menus



Demand Records								
Project Size	Project Type	Technology Type	Location	Total Demand				
Location	2004.1	2004.2	2004.3	2004.4	2005.1	2005.2	2005.3	2005.4
Woburn/Burlington	1.6 %	1.7 %	1.8 %	1.9 %	2.0 %	1.9 %	1.8 %	1.6 %
Lowell area	5.4 %	5.3 %	5.3 %	5.3 %	5.3 %	5.4 %	5.4 %	5.5 %
Northwestern Suburbs	4.5 %	4.0 %	3.7 %	3.6 %	3.7 %	4.1 %	4.7 %	5.3 %
Southwestern Suburbs	4.9 %	4.8 %	4.4 %	4.1 %	4.1 %	4.6 %	5.1 %	5.2 %
Boston/Cambridge	17.7 %	18.9 %	19.7 %	19.8 %	19.2 %	18.0 %	16.3 %	14.7 %
Inner Suburbs	1.5 %	1.6 %	1.7 %	1.8 %	1.8 %	1.9 %	1.8 %	1.8 %
North Shore	1.6 %	1.7 %	1.8 %	1.9 %	2.0 %	1.9 %	1.8 %	1.6 %
South Shore	17.7 %	18.9 %	19.7 %	19.8 %	19.2 %	18.0 %	16.3 %	14.7 %
Gloucester	1.8 %	1.6 %	1.5 %	1.4 %	1.4 %	1.4 %	1.5 %	1.7 %
Brockton area	1.9 %	1.8 %	1.7 %	1.7 %	1.6 %	1.6 %	1.6 %	1.7 %
Worcester	12.9 %	12.3 %	12.0 %	12.2 %	12.8 %	13.7 %	14.7 %	15.7 %
Manchester NH	1.5 %	1.4 %	1.3 %	1.2 %	0.9 %	0.7 %	0.4 %	0.2 %
SE Mass.	4.7 %	4.4 %	4.1 %	3.8 %	3.7 %	3.7 %	3.8 %	4.0 %
Providence RI	6.5 %	4.3 %	2.9 %	2.5 %	3.1 %	4.6 %	6.9 %	9.7 %
Fall River area	2.7 %	3.3 %	3.8 %	3.9 %	3.8 %	3.4 %	2.8 %	2.2 %
Western Mass.	4.5 %	4.9 %	5.2 %	5.3 %	5.2 %	5.0 %	4.7 %	4.4 %
Hertford	8.5 %	8.9 %	9.4 %	9.8 %	10.1 %	10.2 %	10.3 %	10.2 %

OK

This gives information about market segments in previous quarters. The example is for location. Data can be accessed by Excel.



The location of the firm is Lowell.



Project Reports [?] [X]

Select the variables and the number of projects you wish to consider:

<input checked="" type="checkbox"/> Project Number	<input type="checkbox"/> Date of Bid	<input type="checkbox"/> Type of Bid
<input type="checkbox"/> Type of Work	<input type="checkbox"/> Technology	<input type="checkbox"/> Location
<input type="checkbox"/> Duration (quarters)	<input type="checkbox"/> Estimated Prime Cost	<input type="checkbox"/> Start Inflation
<input type="checkbox"/> Company's Markup	<input type="checkbox"/> Current Phase	<input type="checkbox"/> Phase Duration (quarters)
<input type="checkbox"/> Quarters done this phase	<input type="checkbox"/> Estimated Cost	<input type="checkbox"/> Company's Bid price
<input type="checkbox"/> Cumulative Revenue + load	<input type="checkbox"/> Competitor's Markup	<input type="checkbox"/> Cumulative Revenue
<input type="checkbox"/> Cumulative Cost	<input type="checkbox"/> Revenue last Quarter	<input type="checkbox"/> Cost last Quarter
<input type="checkbox"/> Cumulative Revenue-Retention	<input type="checkbox"/> Receivables	<input type="checkbox"/> Payables
<input type="checkbox"/> Uncertified Receivables	<input type="checkbox"/> Uncertified Payables	<input type="checkbox"/> Loading
<input type="checkbox"/> Revenue + Loading	<input type="checkbox"/> Subcontract %	<input type="checkbox"/> Type of Contract
<input type="checkbox"/> Intensity (Weeks per qrt)	<input type="checkbox"/> Duration Start (quarters)	<input type="checkbox"/> Duration Finish (quarters)
<input type="checkbox"/> Budget Cost Cumulative	<input type="checkbox"/> Man Cost Estimated	<input type="checkbox"/> Man Cost last quarter
<input type="checkbox"/> Man Cost Cumulative	<input type="checkbox"/> Start %	<input type="checkbox"/> Execute %

Select All | **Number of Projects to Review:** 10 (49 Projects are currently available)

OK

This gives information about all projects that the Company has been involved with. The database is extensive.



Project Summary for Company at 2006.1

Project Number	Date of Bid	Type of Work	Estimated Prime Cost	Company's Markup	Competitor's Markup
48	2005.2	Office-lo rise	310	10	10.62
49	2005.2	Factory	622	9	9.89
50	2005.2	Office-lo rise	378	10	10.71
51	2005.3	Factory	625	8	8.21
52	2005.3	Office-lo rise	381	10	9
53	2005.3	Warehouse	345	10	8
54	2005.3	Warehouse	960	7	7.44
55	2005.3	Ren-Office	290	11	11.26
56	2005.3	Warehouse	379	10	10.14
57	2005.4	Ren-Office	291	10	9.7
58	2005.4	Warehouse	381	8	8.55
59	2005.4	Ren-Office	246	10	9.71
60	2005.4	Store	3943	8	5.7
61	2005.4	Restaurant	289	12	13.02
62	2005.4	Factory	418	10	10.35



OK

Here is a small section of the database, some information about recent bids.



Invitations to Bid at period 9 (2006.1)

Project Code: 67

Project Type:	Type of Work Warehouse	Design Low Tech.	Location Lowell area
Complexity:	Level Low	Contract Fixed	Bid Competitive
Estimated Cost:	Total \$375,784	Cost Escalation 0.82%	Project Overhead 15.80%

Project Duration: 3 quarters	Phases Description:	2006.2 start up	2006.3 execute	2006.4 finish
	Prime Cost (%):	30.6	38.8	30.6
	Value (%):	30.6	38.8	30.6

Bid **Mark-Up:** 12.00% **Sub Contracting:** 50.00% **Load:** 1.00

Market Reports predict that during this period:

- » Total Demand will change from 198 to between 202 and 206.
- » Inflation Index will change from 146.5 to between 146 and 148.
- » Cost Escalation and Project Overhead are based on market rates.

OK

This is one of the current bid invitations, a very small project. Invitations can be declined. Bids can be front loaded. Subcontracting policy may be important.

Current Invitations to Bid

• Invitations to Bid at 2006.1

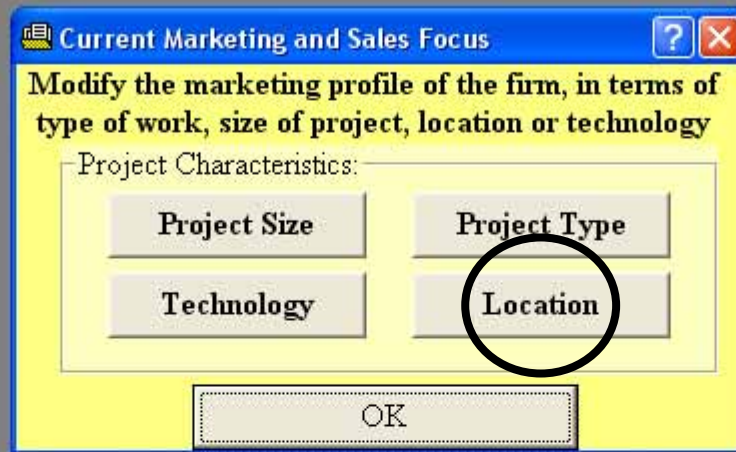
Project Number	Estimated Cost \$000	Period (quarters)	Complexity Type	Mark-up %	Load %	Subcontracting
63 Qren-Office High Tech. Boston/Cambrid	310	1	Moderate Fixed Competitive	0.0	1.0	50.0%
64 Warehouse Low Tech. North Shore	491	3	Low Fixed Competitive	0.0	1.0	50.0%
65 Qren-Apart Very High Tech Boston/Cambrid	304	1	Moderate Fixed Competitive	0.0	1.0	50.0%
66 Qren-Apart High Tech. Boston/Cambrid	232	1	Low Fixed Negotiated	13.29	1.0	50.0%
67 Warehouse Low Tech. Lowell area	376	3	Low Fixed Competitive	0.0	1.0	50.0%
68 Office-med ris Very High Tech Lowell area	751	3	Very High Fixed Select List	0.0	1.0	50.0%

The current bid invitations are for very small projects. Qren indicates quality refurbishment work.

Outcome of Bidding in previous quarter

- Bid Reports 2005.4
-
-
- Proj Company's Bid
- Cost Overheads Bid Mark-up Position Lowest Competitor's Bid
- \$000 \$000 \$000 % Bid Mark-up Position
- \$000 %
-
- 57 292 49 374 10.0% lost 373 9.7% winner
-
- 58 381 51 467 8.0% won 469 8.56% second
-
- 59 247 47 323 10.0% lost 322 9.72% winner
-
- 60 3943 102 4369 8.0% lost 4276 5.71% winner
-
- 61 289 49 378 12.0% won 382 13.03% second
-
- 62 418 52 517 10.0% won 519 10.36% second
-
-
- Total demand index = 198
- Inflation Index = 146.5

The result of the bids made last quarter.
Three small projects were secured.



The company's marketing focus can be changed
According to four market characteristics



Current Marketing and Sales Focus

Project Location

CATEGORY	EMPHASIS	CATEGORY	EMPHASIS
	1 2 3 4 5 <small>None Weak Moderate Strong Very Strong</small>		1 2 3 4 5 <small>None Weak Moderate Strong Very Strong</small>
Woburn/Burlington	<input type="range"/>	Lowell area	<input type="range"/>
Farwestern	<input type="range"/>	New Hampshire	<input type="range"/>
Boston/Cambridge	<input type="range"/>	Inner Suburbs	<input type="range"/>
North Shore	<input type="range"/>	South Shore	<input type="range"/>
Gloucester	<input type="range"/>	Brockton area	<input type="range"/>
Worcester	<input type="range"/>	Manchester NH	<input type="range"/>
SE Mass.	<input type="range"/>	Providence RI	<input type="range"/>
Fall River area	<input type="range"/>	Western Mass.	<input type="range"/>
Hertford	<input type="range"/>		

This is the current marketing focus for location.
 Just click on the slides to change the focus for a particular location.
 This might influence the profile of future bid invitation.



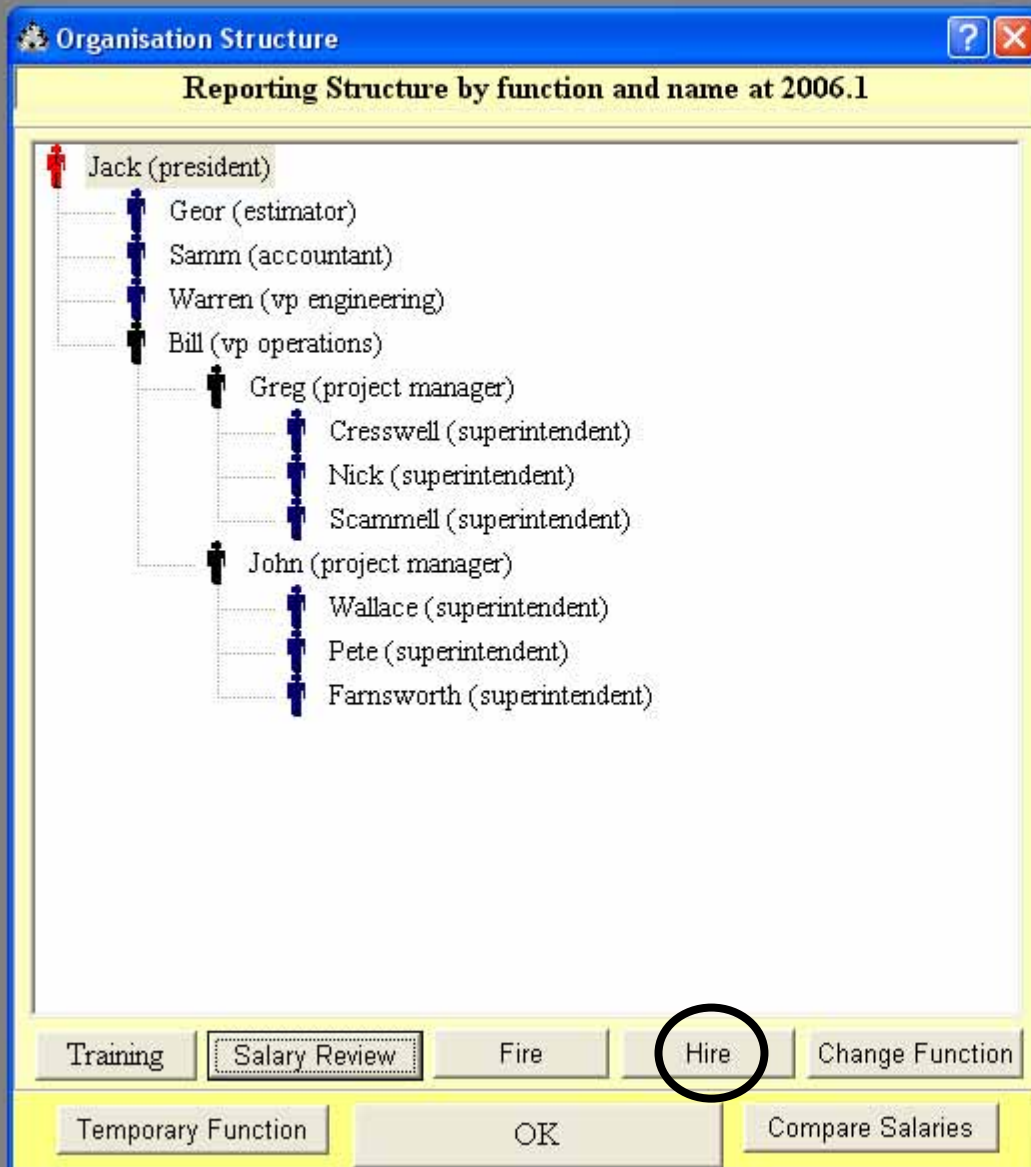
Marketing Policy

Current level of marketing effort

Task	Activity	Function	Level %
4	finalize projects	vp operations	3
16	search & solicit projects	vp operations	4
17	contact clients	president	5
18	budget estimates	vp operations	3
53	public relations	president	6
54	negotiate with clients	president	7

Changes can be made within range -50% to +100% of current level:

This shows how much time is spent on key marketing activities, and by whom. Move the slider to change the amount of marketing effort. Who does marketing can be changed as well, under job design.



The organisation structure can be changed by clicking and dragging an individual to a new boss. Staff can be hired and fired. Salaries can be changed, so can functions. Training can be given.



Candidate Lists [?] [X]

Select function and level for which you wish to review Candidates

	basic	middle	senior	vice pres	president
estimator	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
cost analyst	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
project manager	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
superintendent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
buyer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
field engineer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
business development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
personnel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
accounting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
construction engineer	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
president	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
vp operations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
vp administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Cancel Review Candidates

Candidates for posts are available at various levels, depending on the function. The quality of the candidates and the number will depend on how well the company handles its personnel activities



Candidates for senior construction engineer for period 2006.1 Record Number: 908

CANDIDATE NAME: Mr Bahadoor

Age: 46 **INTERVIEW ASSESSMENT:** mild pragmatist

EDUCATION: four year degree

Joined Industry: 1984 at 24

Reasons for seeking position: family

PREVIOUS EMPLOYMENT	Age	Function	Level	Length of Service	Firm
	39	construction engineer	middle	8	Same
	32	field engineer	middle	7	Same
	24	field engineer	basic	8	New

RECENT EXPERIENCE

Project Type:	structural	SALARY (Yearly)
Complexity:	complex	Current: \$55,751
Project Scale:	moderate	Asking: \$73,403
		Typical: \$79,434

An example candidate for post of senior construction engineer
 Usually there are six or seven candidates for a post.



Job Design: Tasks Related to Functions

Function	Task	Area	Time
estimator	22 layout control lines	start up	7
cost analyst	23 coordinate construction	start up	20
project manager	30 recruit labor	start up	6
superintendent	45 short term job plan	start up	6
buyer	31 layout control lines	execute	5
field engineer	32 coordinate construction	execute	35
bus. development	33 expedite delays	execute	5
personnel	34 project cost reports	execute	5
accountant	40 schedule update	execute	8
const. engineer	42 coordinate construction	finish	15
president	43 project cost report	finish	6
vp operations			
vp administration			
vp engineering			

OK

Every person in the company has a job description based on their function, this comprises a series of tasks. The allocation of tasks can be changed by clicking and dragging a task to another function. In some cases it is possible to over-ride the standard job descriptions. It is also possible to construct additional (temporary) functions.

Workload Allocation

- This indicates who is working on which projects and where staff are required (indicated by ????).
- Total workloads based on the current allocation are given in the totals in the next slide. A standard workload is around 100 units. Staff can be overloaded and their performance will then suffer.
- Allocation is achieved through dragging and dropping an individual into a project, and removed by placing an allocation into the waste-basket.
- It is possible for an individual undertaking one function to undertake the work of another function as shown for the construction engineer, where the superintendents, and in one instance the VP engineering, are doing this work.
- The next slide shows the initial allocation for the period, the subsequent slide shows the final allocation, which shows allocations for Pete and Nick which are somewhat ill-advised.



Allocation of Staff

Workload allocation according to Function and Person

Project	estimator	project manager	superintendent	accountant	const. engineer	president	vp operations	vp engineering								
Mgt. Training																
Tech. Training																
00 administration				Samm	13	Jack	39	Bill	12							
01 personnel						Jack	6	Bill	9	Warren	12					
02 marketing						Jack	18	Bill	10							
03 accts receivable				Samm	30											
04 accts payable	Geor	3		Samm	27											
03 bid	Geor	17														
04 bid	Geor	18														
05 bid	Geor	17														
06 bid	Geor	16														
07 bid	Geor	18														
08 bid	Geor	20														
08 start up			????	21	????	39	Samm	4	????	17	Bill	17	Warren	14		
02 start up			????	22	????	40	Samm	4	????	17	Bill	17	Warren	14		
01 execute			Greg	29	Nick	64	Samm	4	Nick	13			Warren	4		
04 execute			Greg	31	Scammell	68	Samm	5	Scammell	14			Warren	5		
05 execute			John	26	Farnsworth	58	Samm	4	Farnsworth	12			Warren	4		
08 finish			John	8	Farnsworth	20	Samm	4	Farnsworth	5						
09 finish			John	9	Wallace	23	Samm	4	Wallace	5						
00 finish			Greg	8	Cresswell	21	Samm	4	Cresswell	5						
01 fasttrack			????	53	????	113	Samm	11	????	33	Bill	16	Warren	17		
Total	Geor	109	John	58	Scammell	82	Samm	114			Jack	83	Bill	91	Warren	70
			Greg	83	Farnsworth	95										
					Nick	77										
					Pete	0										
					Wallace	28										
					Cresswell	26										



Allocation of Staff

Workload allocation according to Function and Person

Project	estimator	project manager	superintendent	accountant	const. engineer	president	vp operations	vp engineering								
Mgt. Training																
Tech. Training																
00 administration				Samm	13	Jack	39	Bill	12							
01 personnel						Jack	6	Bill	9	Warren	12					
02 marketing						Jack	18	Bill	10							
03 accts receivable				Samm	30											
04 accts payable	Geor	3		Samm	27											
03 bid	Geor	17														
04 bid	Geor	18														
05 bid	Geor	17														
06 bid	Geor	16														
07 bid	Geor	18														
08 bid	Geor	20														
03 start up			John	21	Pete	39	Samm	4	Pete	17	Bill	17	Warren	14		
02 start up			John	22	Nick	40	Samm	4	Nick	17	Bill	17	Warren	14		
01 execute			Greg	29	Nick	64	Samm	4	Nick	13			Warren	4		
04 execute			Greg	31	Scammell	68	Samm	5	Scammell	14			Warren	5		
05 execute			John	26	Farnsworth	58	Samm	4	Farnsworth	12			Warren	4		
03 finish			John	8	Farnsworth	20	Samm	4	Farnsworth	5						
09 finish			John	9	Wallace	23	Samm	4	Wallace	5						
00 finish			Greg	8	Cresswell	21	Samm	4	Cresswell	5						
01 fasttrack			Greg	53	Pete	113	Samm	11	Warren	33	Bill	16	Warren	17		
Total	Geor	109	John	101	Scammell	82	Samm	114			Jack	83	Bill	91	Warren	103
			Greg	136	Farnsworth	95										
					Nick	134										
					Pete	169										
					Wallace	28										
					Cresswell	26										



Performance in the first quarter of
2006 as a result of the decisions
made in that quarter

Bidding

Bid Reports

2006.1

Proj	Company's Bid		Bid \$000	Mark-up %	Position	Lowest Competitor's Bid		Bid \$000	Mark-up %	Position
	Cost \$000	Overheads \$000								
bid 63	253	57	347	12.0%	won	350	13.06%	second		
bid 64	428	63	550	12.0%	lost	547	11.36%	winner		
bid 65	247	57	340	12.0%	won	349	14.82%	second		
bid 66	179	53	263	13.29%	won	263	13.3%	second		
bid 67	316	59	421	12.0%	lost	420	11.69%	winner		
bid 68	683	68	841	12.0%	won	859	14.35%	second		

Total demand index = 202
Inflation Index = 147.1

Three bids were successful but all very small projects, Indeed the invitation list was rather disappointing, probably because of poor marketing strategy

Invitations to Bid in next quarter

• Invitations to Bid at 2006.2

Project Number	Estimated Cost \$000	Period (quarters)	Complexity Type	Mark-up %	Load %	Subcontracting	
bid 69	Office-med ris Mod Tech. Lowell area	921	3	Moderate Fixed Competitive	0.0	1.0	50.0%
bid 70	Office-lo rise Mod Tech. Farwestern Sub	445	3	Low Fixed Competitive	0.0	1.0	50.0%
bid 71	Warehouse Low Tech. Farwestern Sub	415	3	Low Fixed Competitive	0.0	1.0	50.0%
bid 72	Conv to Office Very High Tech North Shore	3344	4	Very High Fixed Competitive	0.0	1.0	50.0%
bid 73	Factory Low Tech. Lowell area	453	3	Low Fixed Competitive	0.0	1.0	50.0%
bid 74	Factory Mod Tech. Lowell area	1141	3	Moderate Fixed Select List	0.0	1.0	50.0%

A rather mixed bag, but certainly larger projects.

Productivity and Efficiency

Productivity and Cost Analysis 2006.1

Proj	Time Analysis				Cost Analysis				2006.1 Total \$000	Overall To Date \$000	
	Schedule		Late+/Early-Finish		This Period						
	Total weeks	Left weeks	Current weeks	Forecast weeks	Labour \$000	Mats \$000	Sub-Con \$000	Man't \$000			
48	39	0	4.0	4.3	Actual:	23	26	53	(8)	110	359
					Budget:	24	24	49	(15)	112	329
49	39	0	-2.5	0.0	Actual:	47	49	107	(8)	211	683
					Budget:	51	51	106	(17)	226	692
50	39	0	-4.3	0.0	Actual:	26	27	60	(8)	120	419
					Budget:	29	29	60	(14)	133	438
51	39	13	-3.0	-3.7	Actual:	85	90	188	(24)	387	578
					Budget:	94	94	195	(20)	404	598
54	39	13	2.8	4.6	Actual:	120	142	276	(25)	563	779
					Budget:	129	129	266	(18)	541	734
56	39	13	1.6	2.1	Actual:	40	44	88	(22)	194	325
					Budget:	42	42	87	(17)	187	296
58	39	26	0.7	2.4	Actual:	30	32	61	(29)	152	152
					Budget:	30	30	61	(16)	136	136
61	13	0	1.8	0.0	Actual:	73	76	150	(61)	360	360
					Budget:	73	73	150	(49)	344	344
62	39	26	-1.5	-3.9	Actual:	25	27	52	(30)	134	134
					Budget:	27	27	57	(19)	131	131

Budget costs are based on original bid adjusted for inflation
and changes in percentages of subcontractor costs.
Weeks needed to completion are calculated as follows:

Most projects are behind schedule and above budget.

Project Revenues and Profitability

Progress Reports

Pro	Type	2006.1	To Date	Tentative	Foreca
Complex/Bid				2006.2	2006.3
competitive					
48	Office-lo riserevenue	119.7	354.6	39.9	
	High Tech. profit	8.4	-1.2	-0.6	
	modera/fixed ov'hd%	6.3	15.0	18.9	
	New Hampshire Border finish			finish	
	pr+oh%	14.7	13.8	18.3	
competitive					
49	Factory revenue	240.9	737.6		
	Mod Tech. profit	12.3	7.4		
	modera/fixed ov'hd%	3.3	7.7		
	Lowell area finish				
	pr+oh%	15.6	15.2		
competitive					
50	Office-lo riserevenue	144.2	471.7		
	High Tech. profit	16.5	11.1		
	modera/fixed ov'hd%	5.3	11.5		
	Lowell area finish				
	pr+oh%	21.8	22.6		
competitive					
51	Factory revenue	440.4	638.8	96.1	
	Mod Tech. profit	12.0	9.5	9.3	
	modera/fixed ov'hd%	5.4	8.8	8.6	
	Lowell area execute			finish	
	pr+oh%	17.5	18.3	17.9	
competitive					
54	Warehouse revenue	580.7	775.3	233.2	82.5
	Mod Tech. profit	3.1	-0.5	8.8	1.7
	modera/fixed ov'hd%	4.3	7.6	3.7	10.5
	New Hampshire Border execute			finish	finish
	pr+oh%	7.4	7.1	12.5	12.1
competitive					
56	Warehouse revenue	207.7	322.4	130.0	21.1
	Mod Tech. profit	6.4	-0.7	12.3	-19.1
	modera/fixed ov'hd%	10.8	16.3	6.0	37.1
	Farwestern Suburbs execute			finish	finish
	pr+oh%	17.2	15.6	18.3	18.0

Pro	Type	2006.1	To Date	Tentative	Forecasts
Complex/Bid				2006.2	2006.3
competitive					
65	Qren-Apart revenue	0.0	0.0	340.1	
	Very High Tech. profit	0.0	0.0	10.3	
	modera/fixed ov'hd%	0.0	0.0	18.6	
	Boston/Cambridge bid			fasttrack	
	pr+oh%	0.0	0.0	28.9	
competitive					
66	Qren-Apart revenue	0.0	0.0	263.4	
	High Tech. profit	0.0	0.0	11.4	
	low/fixed ov'hd%	0.0	0.0	22.5	
	Boston/Cambridge bid			fasttrack	
	pr+oh%	0.0	0.0	33.8	
competitive					
68	Office-med rise revenue	0.0	0.0	276.5	288.3
	Very High Tech. profit	0.0	0.0	10.3	10.0
	v.high/fixed ov'hd%	0.0	0.0	12.1	10.7
	Lowell area bid			start up	execute
	pr+oh%	0.0	0.0	22.4	20.7
					finish
					13.7
Total-revenue					
		2391.7		2182.4	613.8
	-margin (profit)	6.7%		10.3%	8.3%
	-overheads	9.0%		13.5%	10.2%
				303.0	6.1%

Forecasts are based on current levels of efficiency, progress, rate of inflation and, for new projects, expected levels efficiency and progress.

**Gives gross profits and project overheads
Actual and forecast. Secured work is awful.**

Cash Flow

Cash Flow Report (\$000) cumulative 2006.1

Project	48	49	50	51	54	56	58	61	62
Prime costs	359	683	419	578	779	325	152	360	134
Gross Profit	-4	55	53	61	-4	-2	-8	19	1
Revenue-real	355	738	472	639	775	322	144	378	135
-Due to loading	0	0	0	0	0	0	0	-3	0
or client saving/penalties									
Payables-certified	33	76	43	116	175	57	42	117	35
-not cert.	14	0	0	58	74	25	18	0	17
Cash outflow	311	606	377	404	531	243	92	243	82
Receivables-retention	20	0	0	37	55	24	11	0	11
-not cert.	25	0	0	79	111	42	30	0	24
-certified	78	211	125	243	305	114	67	244	65
Cash Inflow	232	527	346	279	305	143	36	131	35
Net current assets	75	134	83	186	222	98	49	127	48
Net cash flow	-79	-79	-30	-125	-226	-100	-56	-111	-47
Intensity weeks	13	13	13	13	13	13	13	13	13
Loading	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Subcontract percent	50%	50%	50%	50%	50%	50%	50%	50%	50%

A complex but important table.

Profit & Loss and Balance Sheet

Financial Report 2006.1

Profit/Loss Account	This Period		Year to Date	
	\$000	%	\$000	%
Gross Revenues	2395			
Gross Profit	164	6.8		
Adjustments from loading or client savings or penalties	-3			
Adjusted Revenues	2392		2392	
Gross Profit	161	6.7	161	6.7
Overheads				
Total Salaries	278		278	
Head office Charge	24		24	
Office expenses	70		70	
Interest +paid(-recd)	5		5	
-Recovered from Project Overheads	-215		-215	
Total	163	6.8	163	6.8
Net Profit	-2	-0.1	-2	-0.1

Cash Flow Statement	\$000	\$000
+Cash in	2111	2111
-Cash out	-2156	-2156
=Net Cash Flow	-45	-45

Balance Sheet	\$000
Accts receivable	1452
+WIP - not cert.	311
+Retentions on WIP	157
+Cash/-Loan	-553
-Accts payable	-720
-Uncertified s/crs	-206
-Reserve - loading	0
=Net Current Assets	443

n.b. Loading revenues are not taken as profit or loss until end of project.

Accts receivable delay (weeks) = 8.4
 Accts payable delay (weeks) = 6.4

Current quarterly rate of interest in annual terms = 3.88 %

The books were not quite balanced.
 Cash management is poor.

Problem Areas

Problem Activities by Project or Area of Admin. 2006.1

Task Area	Source	Project or
9 monitor accts receivable	accountant	503
10 monitor accts payable	accountant	504
22 layout control lines	superintendent	58, 61
23 coordinate construction	superintendent	58, 61
24 confer with a/e	const. engineer	58, 61
28 initial schedules	vp engineering	58, 61
31 layout control lines	superintendent	54
32 coordinate construction	superintendent	54, 56, 61
35 confer with a/e	const. engineer	54, 61
37 change orders	project manager	54
38 general project admin	project manager	54, 61
40 schedule update	superintendent	54, 56, 61
42 coordinate construction	superintendent	48, 61

N.B. Administrative Areas coded 500 and above

There are problems on projects 58 and 61. Both are run by Pete who was terribly overloaded with work. Project 54, the largest that the company has at present is in difficulty. Also the accountant is not managing the cash very well

Performance of Staff

Staff Progress Report 2006.1

Staff No.			Salary \$000	Work load	Performance Displayed	Performance Expected	Commitment	Problems
12	Geor	estimator	59,000	109	V.Good	V.Good	Sound	
4	John	project manager	56,000	101	Good	Good	Sound	Salary
5	Greg	project manager	56,000	136	Good	V.Good	Sound	Salary
8	Scammell	superintendent	48,000	82	Good	Average	Sound	
9	Farnsworth	superintendent	52,000	95	Average	Good	Sound	
10	Nick	superintendent	50,000	134	V.Good	V.Good	Sound	
13	Pete	superintendent	47,000	169	Poor	Good	Left	Technical Relationships Load
14	Wallace	superintendent	47,000	28	Good	Average	Sound	
15	Cresswell	superintendent	50,000	26	V.Good	Good	Sound	
11	Samm	accountant	47,000	114	Average	Good	Sound	
1	Jack	president	163,000	83	V.Good	V.Good	Sound	
2	Bill	vp operations	114,000	91	V.Good	V.Good	Sound	
3	Warren	vp engineering	102,000	103	Good	Good	Sound	

Pete has left the company! But Nick performed very well despite a high workload. Sam has not Performed very well, nor has Farnsworth. Some staff have complained about their salaries.



Allocation of Staff

Workload allocation according to Function and Person

Project	estimator	project manager	superintendent	accountant	const. engineer	president	vp operations	vp engineering								
Mgt. Training																
Tech. Training																
00 administration				Samm	13	Jack	39	Bill	14							
01 personnel						Jack	7	Bill	9	Warren	14					
02 marketing						Jack	18	Bill	10							
03 accts receivable				Samm	32											
04 accts payable	Geor	3		Samm	28											
09 bid	Geor	21														
10 bid	Geor	18														
11 bid	Geor	18														
12 bid	Geor	25														
13 bid	Geor	18														
14 bid	Geor	21														
18 start up			????	23	????	43	Samm	4	????	19		Bill	19	Warren	16	
18 execute			John	26	????	58	Samm	4						Warren	4	
12 execute			John	27	Nick	59	Samm	4	Nick	12				Warren	4	
18 finish			John	8	Farnsworth	20	Samm	4	Farnsworth	5						
11 finish			Greg	9	Nick	23	Samm	4	Nick	5						
14 finish			Greg	9	Scammell	25	Samm	5	Scammell	6						
16 finish			John	8	Farnsworth	21	Samm	4	Farnsworth	5						
13 fasttrack			????	51	????	110	Samm	11	????	32		Bill	16	Warren	17	
15 fasttrack			????	51	????	109	Samm	11	????	32		Bill	16	Warren	17	
16 fasttrack			????	48	????	103	Samm	10	????	30		Bill	15	Warren	16	
Total	Geor	124	John	79	Scammell	31	Samm	134			Jack	84	Bill	109	Warren	88
			Greg	33	Farnsworth	51										
					Nick	99										
					Wallace	0										
					Cresswell	0										

Allocation for Next Quarter

And so we arrive at the next
quarter with an updated
configuration and a new set of
issues to consider

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