SO YOU WANT TO RUN AN NFL FOOTBALL TEAM …
An Honors Interdisciplinary Project

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INTRODUCTION

"How does one challenge bright young minds to explore mundane business topics?" A difficult question at best. Once every few years two of us (Boyer and Yermish) are faced with this challenge as we prepare for our two semester course, "The Business Entity: A Systems Approach", taught within the St. Joseph's University undergraduate honors program. The course is intended for non-business majors looking for some insights into business concepts. This sequence is part of the honors distribution requirements for these select students. It is not enough to teach them business fundamentals; we must make these concepts vibrant with experiential exercises. We must also be sure they have mastered those critical basic concepts without the boredom of incessant lecture. With these challenges in mind we have formulated a course sequence that mixes self-directed textbook study, experiential exercises and a major semester-long project. It is this semester project that is the focus of this paper.

While the students study basic entrepreneurial and small business management concepts through reading, short lectures and self-diagnostic examinations in small-business concepts (e.g. with a text like Longenecker, Moore and Petty 1997) they are also learning to function as a team. This is in preparation for the second semester project. In the past this project involved the creation of small business teams. These teams would identify a business opportunity, develop a business plan and actually start the business. Sometimes unexpected events happen with these projects. For example, there was a still notorious incident several years back with the "Bo Must Go!" T-shirt Company, a reference to a losing coach on a campus very much devoted to its basketball teams. This year, as we have mellowed in our years, we planned a different approach – the creation of a student constructed business simulation.

The second semester began with the announcement of the project. These students, nurtured on computer games were to create one of their own. The stipulation, however, was that the game be based on some sort of business decision making process. The team of four students (three women and one man) selected the management of an NFL Football team as their project. We were also able to enlist the support of two information systems (IS) majors who were looking for advanced work in software development to aid in this game creation project. This created a serendipitous opportunity to explore the issues of interdisciplinary project management. The regular honors students would do the basic game research and, using Microsoft Excel, would prototype the game. In the meantime, the IS students would be studying Visual Basic programming concepts in preparation for the actual game implementation. The semester started without a clear idea of where the game would go or whether the project could be implemented within the fifteen-week semester.

PROJECT STRATEGY

It was immediately obvious that the students faced a daunting task. They had no idea of the complexity of the situation when they selected their project. The goal of the project was to provide a platform for players to make business decisions and see how these decisions would affect their profitability but the students were hard-pressed to identify the kinds of decisions that were actually made. Even if they could

identify some of the decisions they could not model the results of these decisions. As instructors, our first step was to introduce project management concepts: *scope* was the key. We agreed to organize the game around a typical year for the general manager of a team. This year would be broken down into significant periods instead of calendar periods. A decision would have to be made before each period and then the model would track the financial results of that decision into the next period. The following are the stages of the game:

Startup: Selection of team and parameters
Post-Superbowl: First decisions after close of previous season
Preseason: Decisions before the start of preseason games
First Half: Decisions before the start of first half of regular season
Second Half: Decisions before the start of second half of regular season
Final Results: End of season team and financial results

This structure simplified the modeling decisions and the control of the game.

Next, we introduced the concepts of project management planning though the use of formal planning techniques (Moder, Phillips and Davis, 1983). We identified those tasks that each of the sub-teams (Honors and IS) would be responsible for and the sequencing and timing necessary to accomplish the overall project goals. The four Honors team members would be responsible for researching the decisions and the mathematics, the IS team would translate their models into an attractive and functional computer program. Figure 1 is an approximation of the GANTT chart developed to organize the control the project progress.

From Figure 1 we see that there were two major phases of the project. During the first phase the sub-teams would be doing work on an independent basis. The Honors sub-team would

conduct research on the business decisions while the IS sub-team would be learning some of the Visual Basic tools needed to implement the project. During the second phase, the Honors sub-team would prototype the game stages in Excel and hand them off to the IS sub-team to implement. It was clear to all of the participants that coordination and communication were the key to making this happen by the end-of-semester deadline. The client (i.e. the instructors) would reward the vendor (i.e. the students) based on the quality and timeliness of their product.

GAME STRUCTURE

The first major component of the game was identifying an underlying NFL team database from which the first decision (select team) would be made. From the student research (e.g., Carol 1997 and Staudohar 1991) an ACCESS database was constructed. Figure 2 shows an example of the kinds of data recorded in this table. For example, the stadium size would affect the maximum ticket and concession revenues possible. The Visual Basic routine to select the teams and the starting parameters for the game operation would use this database.

Next, the Honors sub-team constructed a standard financial statement to be used to display the results of each period's play. Simplifying decisions were made to keep the project manageable. Figure 3 shows a typical Excel spreadsheet for the Balance Sheet and Income Statement. This structure was then incorporated by the IS sub-team into a display as shown in Figure 4. In the program game structure, this financial profile could be displayed at any time, the values dependent upon the decisions and the game stage.

Before each game period play, the player is required to make a strategic decision for that period. For example, at the beginning of the season, the player must establish a ticket pricing policy. Using modeling techniques (e.g. from Bodily, 1985) the students developed random-

ized results so that each play of the game would be different even though student decisions would be the same. The financial profile for the beginning of the next phase of the game would reflect these results. In Figure 5 we see a typical set of decisions for one of the periods of play as prototyped in Excel. Figure 6 shows this same set of decisions as implemented in the Visual Basic program. After the various decisions are made for the year the final results are computed and shown in Figure 7.

CONCLUSION

Could this game actually be used to train future NFL general managers? Probably not. Of course that was not the intention. Have the designers and implementers of the game profited by the experience? Certainly. The process of creating the game was the simulation exercise, not the game itself. As instructors we seek unusual opportunities to put life into droll academic topics. As students we seek ways to explore content in interesting and challenging ways and to gain skills that will translate into future success. The interdisciplinary approach was key to the success of this endeavor. The Honors students could not have implemented the code of the live game while the IS students may not have had the interest in constructing the mathematical relationships and underlying business models. Together, they succeeded admirably.

Note: A demonstration of the game and models will be available for demonstration.

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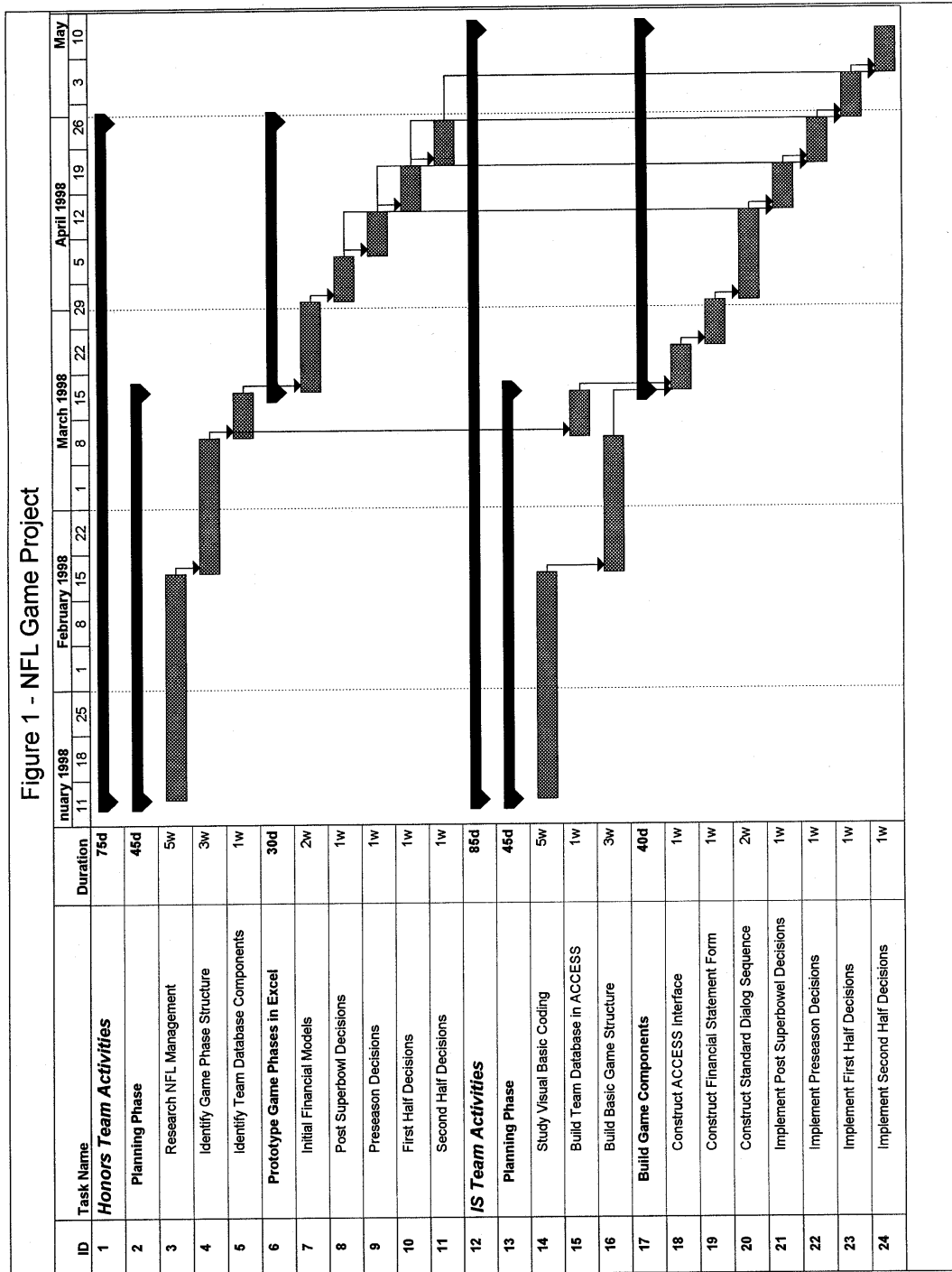
FIGURE 1
Project GANTT Chart

Figure 1 - NFL Game Project

ID	Task Name	Duration
1	*Honors Team Activities*	75d
2	Planning Phase	45d
3	Research NFL Management	5w
4	Identify Game Phase Structure	3w
5	Identify Team Database Components	1w
6	Prototype Game Phases in Excel	30d
7	Initial Financial Models	2w
8	Post Superbowl Decisions	1w
9	Preseason Decisions	1w
10	First Half Decisions	1w
11	Second Half Decisions	1w
12	*IS Team Activities*	85d
13	Planning Phase	45d
14	Study Visual Basic Coding	5w
15	Build Team Database in ACCESS	1w
16	Build Basic Game Structure	3w
17	Build Game Components	40d
18	Construct ACCESS Interface	1w
19	Construct Financial Statement Form	1w
20	Construct Standard Dialog Sequence	2w
21	Implement Post Superbowl Decisions	1w
22	Implement Preseason Decisions	1w
23	Implement First Half Decisions	1w
24	Implement Second Half Decisions	1w

FIGURE 2
ACCESS Team Database

	TeamName	City	Stadium Name	Capacity	% of sellouts	Coach	Rental Agreement
▶	49ers	San Fransic	3Com Park	70,140	100%	Steve Mariucci	10%
	Bears	Chicago	Soldier Field	67,000	62%	Dave Wannstadt	0%
	Bengels	Cincinnati	Riverfront Stadium	59,755	100%	Bruce Coslet	10%
	Bills	Buffalo	Rich Stadium	80,290	100%	Marv Levy	0%
	Broncos	Denver	Mile High Stadium	76,123	75%	Mike Shanahan	8%
	Buccaneers	Tampa Bay	Tampa Stadium	74,317	38%	Tony Dungy	0%
	Cardinals	Arizona	Sun Devil Staduim	73,248	12%	Vince Tobin	0%
	Chargers	San Diego	Jack Murphy Stadium	60,750	25%	Kevin Gilbride	8%
	Chiefs	Kansas City	Arrowhead Stadium	78,097	62%	Marty Schottenhei	0%
	Colts	Indianapolis	Hoosier Dome	61,000	62%	Jim Mora	0%
	Cowboys	Dallas	Texas Stadium	73,855	0%	Chan Gailey	8%
	Dolphins	Miami	Pro Player Stadium	74,916	38%	Jimmy Johnson	0%
	Eagles	Philadelphia	Veterans Stadium	66,943	100%	Ray Rhodes	10%
	Falcons	Atlanta	Georgia Dome	71,228	38%	Dan Reeves	10%
	Giants	New York	Giants Stadium	77,000	88%	Jim Fassel	15%
	Jaguars	Jacksonville	AMTEL Stadium	73,000	86%	Tom Coughlin	10%
	Jets	New York	Giants Stadium	77,000	12%	Bill Parcells	15%
	Lions	Detroit	Pontiac Silverdome	80,635	12%	Bobby Ross	7%
	Oilers	Tennessee	Liberty Bowl	62,380	0%	Jeff Fisher	10%
	Packers	Green Bay	Lambeau Field County Stadium	59,000	88%	Mike Holmgren	0%
	Panthers	Carolina	Ericsson Stadium	72,520	100%	Dom Capers	9%
	Patriots	Foxboro	Foxboro Stadium	60,000	12%	Pete Carroll	0%
	Raiders	Oakland	Oakland-Alameda County Colise	62,500	0%	Joe Bugel	8%
	Rams	St. Loius	Trans World Dome at America's	66,000	50%	Dick Vermiel	7%
	Ravens	Baltiomore	Camdem Yards	70,000	75%	Ted Marchibroda	0%

Record: 1 of 30

Datasheet View

FIGURE 3
Typical Prototype Excel Financial Statement

Balance Sheet					
31-Jan-98					
Assets			**Liabilities**		
Cash and Cash Equivalents	$	20,000,000	Accounts Payable	$	20,000,000
Receivables	$	10,000,000	Accrued Expenses		
Inventories	$	7,000,000	Long Term Debt	$	15,000,000
Pre-Paid Expenses	$	9,000,000			
Property and Equipment	$	3,800,000			
Other Assets	$	1,200,000	Other Liabilities	$	4,000,000
			Total Liabilities	$	39,000,000
			Owner's Equity		
			Retained Earnings	$	12,000,000
Total Assets	$	51,000,000	**Total Liabilities and Equity**	$	51,000,000
***Note: Players' salaries are not					
included in above balance sheet.					
Player Contract Liabilities for Year	$	98,000,000			
	Income Statement				
	Year ending January 31, 1998				
Revenues			$	250,000,000	
Costs and Expenses:					
Salaries, Benefits, and Other Oper.	$	180,000,000			
Selling, Gen, and Admin. Exp.	$	20,000,000			
Interest Expense	$	10,000,000			
Income before Taxes			$	40,000,000	
Income Tax Expense			$	7,200,000	
Net Income			$	32,800,000	

FIGURE 4
Typical Financial Profile from Game Program

FIGURE 5
Typical Excel Prototype Decision Sheet

FIGURE 6
Typical Game Decision Input Form

FIGURE 7
Game Final Results Screen