

REAL HOT Group Projects

CASE 1: ASSESSING THE VALUE OF INFORMATION

TREVOR TOY AUTO MECHANICS

Trevor Toy Auto Mechanics is an automobile repair shop in Lindsay, Ontario. Over the past few years, Trevor has seen his business grow from a two-bay car repair shop with only one other employee to a 15-bay car repair shop with 21 employees.

Up to now, Trevor has advertised that he will perform any work on any vehicle. But that's becoming problematic as cars are becoming increasingly more complex. Trevor has decided he wants to create a more focused repair shop, and is asking for your help. He has provided you with a spreadsheet file that contains a list of all the repairs his shop has completed over the past year. The file contains the fields provided in the table here.

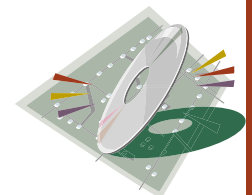
Column	Name	Description
A	MECHANIC #	A unique number assigned to the mechanic who completed the work
B	CAR TYPE	The type of car on which the work was completed
C	WORK COMPLETED	What type of repair was performed on the car
D	NUM HOURS	How long in hours it took to complete the work
E	COST OF PARTS	The cost of the parts associated with completing the repair
F	TOTAL CHARGE	The amount charged to the customer for the repair

Trevor is open to any suggestions you might have. So your analysis might include any combination of (1) keeping only certain mechanics, (2) repairing only certain types of cars, and/or (3) performing only certain types of repairs.

It is your responsibility to analyze the list and make a recommendation to Trevor concerning how he should focus his business.

Some Particulars You Should Know

1. As you consider the information provided to you, think in terms of what information is important—you might need to use the existing information to create new information.
2. All mechanics are paid the same hourly wage.
3. Disregard any considerations associated with downsizing such as overhead—simply focus on the information provided to you.
4. Disregard any considerations for potential competition located near Trevor.
5. Upon completing your analysis, please provide concise yet detailed and thorough documentation (in narrative, numeric, and graphical form) that justifies your recommendations.
6. File: **trevor.xls** (this Excel file is on the CD-ROM and on this book's Web page: www.mcgrawhill.ca/college/haag)



Skills Module 1
Decision Analysis—
Excel

CASE 2: USING RELATIONAL TECHNOLOGY TO TRACK PROJECTS

PHILLIPS CONSTRUCTION

The Montreal-based Phillips Construction Company, in business since 1993, specializes in subcontracting the development of single-family homes. Phillips has maintained a talented pool of certified staff and independent consultants allowing the flexibility and combined experience required to meet the needs of their nearly 300 completed projects in the metropolitan Montreal area. The field of operation methods that Phillips Construction is responsible for as it relates to building include: structural development, heating and cooling, plumbing, and electricity.

The company charges its clients by billing the hours spent on each contract. The hourly billing rate is dependent on the employee's position according to the field of operations (as noted above).

Figure RHGP.1 shows a basic report that Phillips managers would like to see every week concerning what projects are being assigned. The company is organized into four different operations—Structure (500), Plumbing (501), Electrical (502), and Heating and Ventilation (503); each can and should have many subcontractors who specialize in that area.

Because of the boom in home sales over the last several years, Phillips Construction has decided to implement a relational database model to track project details according to project name, hours assigned, and charges per hour for each job description. Originally, Phillips Construction decided to let one of its employees handle the construction of the database. However,

Figure RHGP.1

Phillips Construction Project Detail

PHILLIPS CONSTRUCTION PROJECT DETAIL						
PROJECT NAME	ASSIGN DATE	EMP LAST NAME	EMP FIRST NAME	JOB DESCRIPTION	ASSIGN HOUR	CHARGE/HOUR
Chatfield						
	Monday, June 10, 2002	Jones	Anne	Heating and Ventilation	3.4	\$84.50
	Monday, June 10, 2002	Sullivan	David	Electrical	1.8	\$105.00
	Tuesday, June 11, 2002	Frommer	Matt	Plumbing	4.1	\$96.75
	Wednesday, June 12, 2002	Newman	John	Electrical	1.7	\$105.00
	Wednesday, June 12, 2002	Bawangi	Terry	Plumbing	4.1	\$96.75
Summary of Assignment Hours and Charges					15.10	\$1,448.15
Evergreen						
	Monday, June 10, 2002	Smithfield	William	Structure	3.0	\$35.75
	Monday, June 10, 2002	Newman	John	Electrical	2.3	\$105.00
	Monday, June 10, 2002	Nenior	David	Plumbing	3.3	\$96.75
	Tuesday, June 11, 2002	Marbough	Mike	Heating and Ventilation	2.6	\$84.50
	Wednesday, June 12, 2002	Johnson	Peter	Electrical	2.0	\$105.00
	Wednesday, June 12, 2002	Newman	John	Electrical	3.6	\$105.00
	Wednesday, June 12, 2002	Olenkoski	Glenn	Structure	1.9	\$35.75
Summary of Assignment Hours and Charges					18.70	\$1,543.65
Roxborough						
	Monday, June 10, 2002	Washberg	Jeff	Plumbing	3.9	\$96.75
	Monday, June 10, 2002	Ramora	Anne	Plumbing	2.6	\$96.75
Wednesday, June 26, 2002						

that employee has not had the time to completely implement the project. Phillips Construction has asked you to take over.

The entity classes and primary keys for the database have been identified:

Entity	Primary Key
Project	Project Number
Employee	Employee Number
Job	Job Number
Assign	Assign Number

The following business rules have also been identified:

1. A job can have many employees assigned but must have at least one.
2. An employee must be assigned to one and only one job code.
3. An employee can be assigned to work on one or more projects.
4. A project can be assigned to only one employee but need not be assigned to any employee.

Your job is to be completed in the following phases:

1. Develop and describe the entity-relationship diagram.
2. Use normalization to assure the correctness of the tables.
3. Create the database using a personal DBMS package (preferably Microsoft Access).
4. Use the DBMS package to create the basic report in Figure RHGP.1.

Some Particulars You Should Know

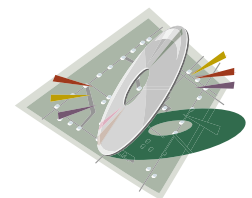
1. You may not be able to develop a report that looks exactly like the one in Figure RHGP.1. However, your report should include the same information.
2. Complete personnel information is tracked by another database. For this application, include only the minimum employee number, last name, first name, and job code.
3. Information concerning all employees, departments, and systems is not readily available. You should, however, create information for several fictitious systems to include in your database.
4. File: Not applicable

CASE 3: BUILDING A DECISION SUPPORT SYSTEM

CREATING AN INVESTMENT PORTFOLIO

Most experts recommend that if you're devising a long-term investment strategy you should make the stock market part of your plan. You can use a DSS to help you decide on what stocks to put into your portfolio. You can use a spreadsheet to do the job. The information you need on ten stocks is contained in a Word file called **stocks.doc**. This information consists of:

1. Two years of weekly price data on ten different stocks
2. Two years of weekly averages of the Dow Jones Industrial Average and the NASDAQ Composite indexes
3. Dividends and cash flow per share over the past ten years—see Yahoo! Finance (finance.yahoo.com)



Skills Module 2
Database Design—
Access
SQL
Database—
Normalization

Using this information, build a DSS to perform stock analysis consisting of the following tasks:

1. Examine diversification benefits:

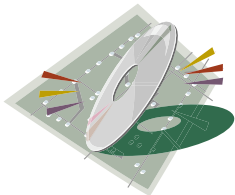
- A. Calculate the average return and standard deviation(s) of each of the ten stocks.
- B. Form 15 different portfolios: five with two stocks each; five with five stocks each; five with ten stocks each.

Answer the following questions using your DSS:

- How does the standard deviation of each portfolio compare to the (average) standard deviation of each stock in the portfolio?
- How does the average return of the portfolio compare to the average return of each stock in the portfolio?
- Do the benefits of diversification seem to increase or diminish as the number of stocks in the portfolio gets larger?
- In the two-stock and five-stock portfolios, what happens if you group your stocks toward similar industries?

2. Value each of the stocks:

- A. Estimate the dividend growth rate on the basis of past dividends.
- B. Estimate next year's dividend using this year's dividend and the estimated growth rate.
- C. Generate two graphs, one for past dividends and one for estimated dividends for the next five years.



Skills Module 1
Decision Analysis—
Excel

Some Particulars You Should Know

1. When performing your calculations, use the weekly returns. That is, use the change in the price each week rather than the prices themselves. This gives you a better basis for calculation because the prices themselves don't usually change very much.
2. File: **stocks.doc** (this Word file is on the CD-ROM and on this book's Web page: www.mcgrawhill.ca/college/haag)

**CASE 4:
ADVERTISING WITH BANNER ADS**

HIGHWAYSANDBYWAYS

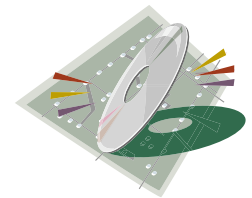
Business is booming at HighwaysAndByways, a dot-com focusing on selling accessories for car enthusiasts (e.g., floor mats, grill guards, air fresheners, stereos, etc.). Throughout the past year, HighwaysAndByways has had Web site management software tracking what customers buy, the Web sites they came from, and the Web sites they went to after visiting HighwaysAndByways. That information is stored in a spreadsheet file and contains the fields in the table here. Each record in the spreadsheet file represents an individual visit by a customer that resulted in a purchase.

Column	Name	Description
A	CUSTOMER ID	A unique identifier for a customer who made a purchase
B	TOTAL PURCHASE	The total amount of a purchase
C	PREVIOUS WEB SITE	The Web site from which the customer came to visit HighwaysAndByways
D	NEXT WEB SITE	The Web site the customer went to after making a purchase at HighwaysAndByways

HighwaysAndByways is interested in determining three items and has employed you as a consultant to help. First, HighwaysAndByways wants to know on which Web sites it should purchase banner ad space. Second, HighwaysAndByways wants to know which Web sites it should contact to determine if those Web sites would like to purchase banner ad space on the HighwaysAndByways site. Finally, HighwaysAndByways would like to know which sites it should develop reciprocal banner ad relationships with; that is, HighwaysAndByways would like a list of sites on which it would obtain banner ad space while providing banner ad space on its site for those sites.

Some Particulars You Should Know

1. As you consider the information provided to you, think about the levels of information literacy. In other words, don't jump to conclusions before carefully evaluating the provided information.
2. You don't know if your customers made purchases at the Web site they visited upon leaving HighwaysAndByways.
3. Upon completing your analysis, please provide concise yet detailed and thorough documentation (in narrative, numeric, and graphic form) that justifies your recommendations.
4. File: **clickstreams.xls** (this Excel file is on the CD-ROM and on this book's Web page: www.mcgrawhill.ca/college/haag)



Skills Module 1
Decision Analysis—
Excel

CASE 5: OUTSOURCING IT

A&A SOFTWARE

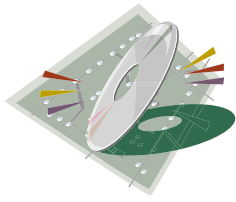
A&A Software Incorporated, founded in 1992, provides innovative search software, Web site accessibility testing/repair software, and usability testing/repair software. All serve as part of their desktop and enterprise content management solutions for government, corporate, educational, and consumer markets. The company's solutions are used by Web site publishers, digital media publishers, content managers, document managers, business users, consumers, software companies, and consulting services companies. A&A solutions help organizations develop long-term strategies to achieve Web content accessibility, enhance usability, and comply with U.S. and international accessibility and search standards.

You manage the customer service group for the A&A Software development group. You have just received an email from the A&A Software CIO Sue Downs saying that the number of phone calls from customers having problems with one of your newer applications is on the rise. This company has a ten-year history of approximately 1 percent turnover a year and their focus had always been on customer service. With the informal motto of "Grow big, but stay small," they took pride in 100 percent callbacks in customer care, knowing that their personal service was one thing that made them outstanding.

The rapid growth to six times their original customer-base size has forced A&A Software to deal with difficult questions for the first time, such as "How do we serve this many customers? How do we keep our *soul*—that part of us that honestly cares very much about our customers? How will we know that someone else will care as much and do as good a job as we have done?"

In determining what to do, the A&A Software Company reviewed a similar scenario of a major e-bank that was considering outsourcing its customer service in order to handle a large projected number of customers through several customer interaction channels. Although the e-bank had excellent people, they felt that their competencies were primarily in finance rather than customer service, and that they needed to have the expertise that a customer-service-focused company could offer. They also discovered that it would be cost-effective to outsource their customer service centre.

Additionally, the outsourcing approach would be relatively hassle-free, since they would not have to set up their own CIC (customer interaction centre/call centre).



Skills Module 1
Decision Analysis—
Excel

Some Particulars You Should Know

1. Create a weekly analysis from the data provided in **forecast.xls**.
2. The price of the products, the actual product type, and any warranty information is irrelevant.
3. Develop a growth, trend, and forecast analysis. You should use a three-day moving average: a shorter moving average might not display the trend well and a much longer moving average would shorten the trend too much.
4. Upon completing your analysis, please provide concise yet detailed and thorough documentation (in narrative, numeric, and graphical forms) that justifies your recommendations.
5. File: **forecast.xls** (this Excel file is on the CD-ROM and on this book's Web page: www.mcgrawhill.ca/college/haag)

CASE 6: MAKING THE CASE WITH PRESENTATION GRAPHICS SOFTWARE

INFORMATION TECHNOLOGY ETHICS

Management at your company is concerned about the high cost of computer crime, from lawsuits over e-mail received to DoS attacks and crackers breaking into the corporate network to steal information. You've been asked to make a presentation to inform your colleagues. Develop a presentation using a presentation package such as Microsoft's PowerPoint.

You can choose your presentation's emphasis from the following topics:

- Ethics as it relates to IT systems
- Types of crime aimed at IT systems (such as viruses)
- Types of crime that uses IT systems as weapons (such as electronic theft of funds from one account to another)
- Security measures, how good they are, what they cost, how expensive they are to implement
- Electronic monitoring of employees (from employer and employee standpoints)
- Collection and use of personal information on consumers

Sources of Information

- In the file **ethics.doc**, you'll find sources for the topics listed above.
- The Web is a great place to find lots of information.
- Most business publications, such as *Business Week*, *InformationWeek*, *Fortune*, and *The Globe and Mail*, frequently have good articles on ethics, cyber-crime, and security. You can get some of these articles on the Web.
- General news publications such as *Newsweek* and *USA Today* print articles on these topics.

Your task is to weave the information you find into a coherent presentation using graphs and art where appropriate.

Some Particulars You Should Know

1. Content principles:
 - Each slide should have a headline.
 - Each slide should express one idea.
 - Ideas should follow logically.
2. Design principles:
 - Follow the "Rule of 7"—no more than seven lines per slide and seven words per line.
 - Keep it simple.
 - Keep it organized.
 - Create a path for the eye.

- Divide space in an interesting way.
 - Use at least 30-point type.
 - Use colour and graphics carefully, consistently, and for a specific purpose.
 - Use high-contrast colours (black/white, deep blue/white, etc.).
3. File: **ethics.doc** (this Word file is on the CD-ROM and on this book's Web page: www.mcgrawhill.ca/college/haag)

CASE 7: SHOULD I BUY OR SHOULD I LEASE?

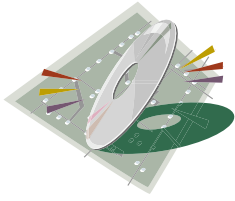
ON THE VINE GRAPES

On the Vine Grapes, a leading supplier of grapes to the wine-producing industry in the Niagara Region, wants to expand their delivery services and their reach to market by increasing their current fleet of delivery trucks. Some of the older vehicles were acquired through closed-end leases with required down payments, mileage restrictions, and hefty early-termination penalties. Other vehicles were purchased using traditional purchase-to-own loans which often resulted in high depreciation costs and large maintenance fees. All vehicles were acquired one at a time through local dealers.

On the Vine Grapes has asked you to assist in developing a lease/buy cost analysis worksheet in order to make the best cost-effective decision. Currently the director of operations, Bill Smith, has identified a 2002 Ford F-550 4×2 SD Super Cab 161.8 inch WB DRW HD XLT as the truck of choice. This vehicle has a retail price of \$34,997 or a lease price of \$600/month through Ford Motor Credit Company.

There are some basic fees and costs that you need to factor in:

1. Lease Costs	
Refundable security deposit	500
First month's payment at inception	500
Other initial costs	125
Monthly lease payment for remaining term	600
Last month payment in advance	No
Allowable annual kilometres	20,000
Estimated annual kilometres to be driven	30,000
Per-kilometre charge for excess kilometres	0.10
2. Purchase Costs	
Retail price including sales taxes, title	34,997
Down payment	4000
Loan interest rate	8.75%
Will interest be deductible business or home equity interest?	Yes
Is the gross loaded weight of the vehicle over 2700 kilograms?	Yes
3. Common Costs and Assumptions	
Total lease/loan term	36
Discount percent	8.75
Tax bracket—combined federal and provincial	33%
Business use percentage	100%



Skills Module 1
Decision Analysis—
Excel

Some Particulars You Should Know

1. In the file **buyorlease.xls** there is a template that you can use to enter the data above. There is also a sheet that has been developed to assist you with the annual depreciation for an automobile.
2. Create a detailed summary sheet of the lease/buy option for On the Vine Grapes.
3. File: **buyorlease.xls** (this Excel file is on the CD-ROM and on this book's Web page: www.mcgrawhill.ca/college/haag)

CASE 8: ASSESSING A WIRELESS FUTURE

EMERGING TRENDS AND TECHNOLOGY

According to Steve Ballmer, CEO of Microsoft, “Intelligent wireless handheld devices are going to explode, absolutely explode over the next several years.” Wireless, mobility, small form factor, pervasive computing, the anytime network—whatever name you choose—it's here. The price of easy-to-handle devices that provide access to a variety of applications and information is rapidly falling while the efficiencies of such devices are increasing. More and more, the business user is looking to mobile devices to perform tasks that previously could only be handled by the desktop PC. End-user adoption is skyrocketing. The near future will demonstrate a true growing period for mobile computing as the world changes to one characterized by the mobile user.

As this market sector grows, software and information companies are beginning to evolve their products and services. Wireless mobility and associated functionality provide new market opportunities for both established companies and new entrants to increase efficiency and take advantage of new revenue possibilities. The services to Internet-enabled mobile devices create a vast array of new business opportunities for companies as they develop products and services that utilize location, time, and immediate access to information in innovative ways.

Some of the lower-profile topics currently being developed are:

- Hard drives for wireless devices
- The global-roaming movement
- Mobile power supplies that run on next-generation fuel cells

All three could bring about significant changes in the wireless space.

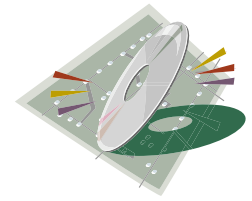
You have been asked to prepare a presentation using a presentation package such as Microsoft's PowerPoint. Using the list of wireless solution providers and manufactures provided in **wireless.htm**, select at least two developers and create a presentation that will emphasize the following topics:

1. What are the current products or services under development?
2. What is the target market for that product or service?
3. What are the key features that product or service will bring to the wireless industry?
4. Which provider/manufacture/developer seems to be the first to market with their product?
5. How is the wireless product or service content being delivered?
6. Are the products or services able to deploy interactive multimedia applications to any digital wireless device, on any carrier, or across any type of network?
7. Are there any new privacy concerns that are being discussed in relation to the new products or services? (E.g., concerns from being able to track users' preferences, purchasing history, or browsing preferences, or the capability to track users' physical location while using wireless devices.)
8. How does this product or solution affect the global marketplace?
9. What is the current retail price for the wireless products or solutions?
10. Is current bandwidth available for the wireless industry a concern?

Your task is to weave the information you find into a coherent presentation using graphs and art where appropriate.

Some Particulars You Should Know

1. Content principles:
 - Each slide should have a headline.
 - Each slide should express one idea.
 - Ideas should follow logically.
2. Design principles:
 - Follow the “Rule of 7”—no more than seven lines per slide and seven words per line.
 - Keep it simple.
 - Keep it organized.
 - Create a path for the eye.
 - Divide space in an interesting way.
 - Use at least 30-point type.
 - Use colour and graphics carefully, consistently, and for a specific purpose.
 - Use high-contrast colours (black/white, deep blue/white, etc.).
3. File: **wireless.htm** (this HTML file is on the CD-ROM and on this book’s Web page: www.mcgrawhill.ca/college/haag)



Skills Module 1
Decision Analysis—
Excel

CASE 9: THE NEXT GENERATION: DOT-COM ASPs

FRONT RANGE CAR RENTAL

E-commerce is creating a new set of challenges for dot-com startups to well-established brick-and-mortar companies. Driven by the need to capture increasing shares of business online, IT managers take the first step by deciding on a commerce application. Then they face the most important decision: whether to assign implementation, deployment, and application hosting to internal IT resources or to contract for these services with an ASP.

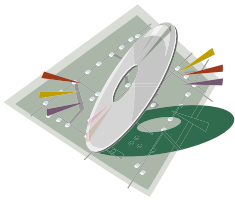
Three years ago, nobody had even heard the term *application service provider (ASP)*. Now the ASP market is a certified phenomenon. In this short space of time, the concept of leasing applications to businesses has grown to an interesting but unproven proposition in an ever-expanding industry.

You have been hired by Front Range Car Rental, a major car rental company in Manitoba, to research ways of using technology to leverage more business. The company needs a Web Service written which transacts reservations on its back-end mainframe system. This Web Service will need to be made available to airline partners to integrate the travel booking process. When a consumer books a flight, he or she is also given the option to reserve a car from the airline site. The rental details will need to be captured and transported to the car rental company’s Web service, which processes the reservation. This new capability will help the car rental company to drive more bookings and achieve a competitive advantage in a highly commoditized market.

The major task Front Range needs you to research is what the cost benefits would be for in-house implementation and an ASP deployment. You have been given an analysis spreadsheet, **dotcomasp.xls**, with all the detailed information; however, you will need to use the Internet to find current price information. Another file, **dotcomasp_search.htm**, has been developed for you with a list of search engines that will provide you with a focal point for your research.

Some Particulars You Should Know

1. All ASPs are not created equal. Here are some questions to help you identify their strengths, weaknesses, capabilities, and core competencies.



Skills Module 1
Decision Analysis—
Excel

- Does the ASP offer full lifecycle services, including proof of concept, installation, operations, training, support, and proactive evolution services?
 - What is the ASP's depth and breadth of technical expertise? What are the company's specialties?
 - Where and how did key technical staff obtain their expertise?
 - Does the ASP have actual customers online, and if so what results have they achieved?
 - Does the ASP offer service-level agreements, and what are the penalties for SLA violations?
 - Specifically, how does the ASP's infrastructure deliver:
 - High availability (uptime)?
 - Assured data integrity?
 - Scalability?
 - Reliability?
 - High performance?
 - Security and access control?
 - Does the ASP offer 24/7 technical support to end users? Escalation procedures? High-priority problem resolution? Dedicated account managers?
 - Can the ASP provide development expertise to customize the applications?
 - How does the ASP handle updates? Adding product modules?
 - Is the ASP capable of assisting with add-on projects such as bringing a new factory online or adding a new supplier?
 - Can the ASP provide a comprehensive suite of integrated applications (as opposed to a single application)?
2. Files: **dotcomasp.xls** (Excel File) and **dotcomasp_search.htm** (HTML file) (these two files are on the CD-ROM and on this book's Web page: www.mcgrawhill.ca/college/haag)

CASE 10: ANALYZING OPERATING LEVERAGE

PONY ESPRESSO

Pony Espresso is a small business that sells specialty coffee drinks at office buildings. Every morning and afternoon, trucks arrive at offices' front entrances, and employees purchase various stimulants with names such as Java du Jour and Café de Colombia. The business is profitable, but Pony Espresso offices are located to the north of town, where lease rates are less expensive, while the principal sales area is south of town. This means the trucks must drive crosstown four times every day.

The cost of transportation to and from the sales area, plus the power demands of the truck's coffee-brewing equipment, is a significant portion of the variable costs. Pony Espresso could reduce the amount of driving—and therefore the variable costs—if it moved the offices much closer to the sales area.

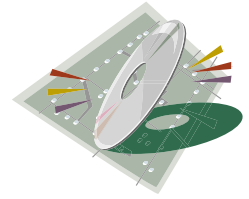
Pony Espresso presently has fixed costs of \$10,000 per month. The lease of a new office, closer to the sales area, would cost an additional \$2200 per month. This would increase the fixed costs to \$12,200 per month.

Although the lease of new offices would increase the fixed costs, a careful estimate of the potential savings in gasoline and vehicle maintenance indicates that Pony Espresso could reduce the variable costs from 60 cents per unit to 35 cents per unit. Total sales are unlikely to increase as a result of the move, but the savings in variable costs should increase the annual profit.

You have been hired by Pony Espresso to assist in the cost analysis and new lease options to determine a growth in profit margin. You will also need to calculate a degree of operating leverage to better understand the company's profitability. Degree of operation leverage (DOL) will give Darien Presley, CEO of Pony Espresso, a great deal of information for setting operating targets and planning profitability.

Some Particulars You Should Know

1. Consider the information provided, especially the change in the variability of the profit from month to month. From November through January, when it is much more difficult to lure office workers out into the cold to purchase coffee, Pony Espresso barely breaks even. In fact, in December 2002, the business loses money.
2. First, develop the cost analysis on the existing lease information using the monthly sales figures provided to you in the file **ponyexpresso.xls**. Secondly, develop the cost analysis from the new lease information provided above.
3. You need to calculate the variability that is reflected in the month-to-month standard deviation of earnings for the current cost structure and the projected cost structure.
4. Do not consider any association with downsizing such as overhead—simply focus on the information provided to you.
5. You will need to calculate the EBIT—earnings before interest and taxes.
6. Would the DOL and business risk increase or decrease if Pony Espresso moved its office?
Note: Variability in profit levels, whether measured as EBIT, operating income, or net income, does not necessarily increase the level of business risk as the DOL increases.
7. File: **ponyexpresso.xls** (this Excel file is on the CD-ROM and on this book's Web page: www.mcgrawhill.ca/college/haag)



Skills Module 1
Decision Analysis—
Excel