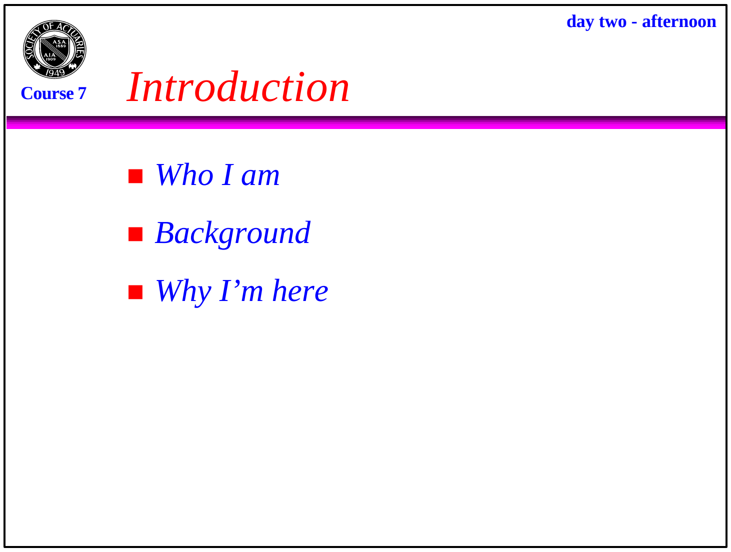
Slide 1



Who am I, and why am I here?

In my regular work I often use models and need to communicate the results to both actuaries and non-actuaries. This communication is done with written reports as well as oral presentations.

This is exactly what this seminar is about – using models and communicating results.

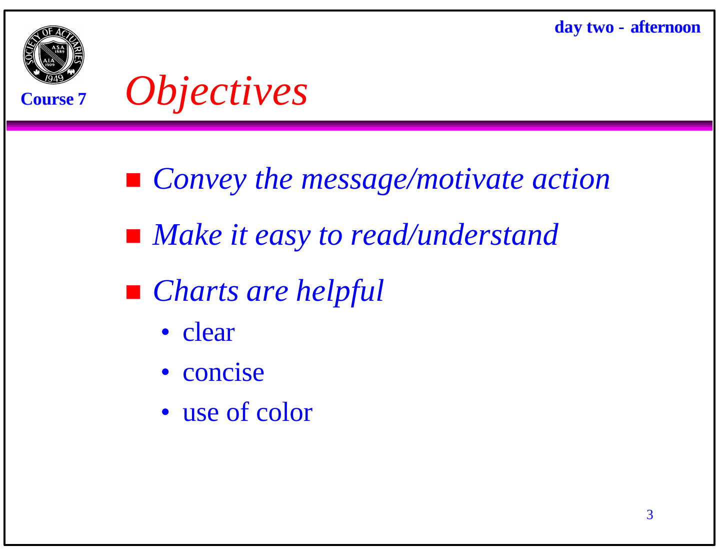
How many would say they use models regularly?

Is communicating a large part of your job?

The modeling process: Actuaries are given problems and they need to come-up with solutions. Everything they do between getting the problem and communicating one or more solutions to the problem is the modeling process. An important determinant of success of an actuary is the ability to use the modeling process and communicate its results.

Some modeling processes are very technical, others are very simple. Some processes have large data components; some have a large focus on the model design. You are being exposed to a number of different models, but there is one common element in all of this – the need to communicate results.

Slide 2



Remember the general objective of any communication is to convey a message or to motivate some action. Great actuarial work can be wasted if the results are not communicated effectively. It is important to start planning the communication very early in the project, and consider communication throughout the project.

Effective communication needs to be easy to follow and understand. Let's discuss some examples of written communications and what made them effective. You have all had articles or publications circulated to you. I'm sure you do not read everything that is placed on your desk.

What would cause you to read an article, or conversely not read it? Also, what would cause you to put down a report after you have started reading it?

Charts can be very useful in conveying a message and getting your report read. A chart breaks-up the text making the report visually much less intimidating. A chart can make your report a faster read.

Many people are visual thinkers, so charts are ideal. However, when you use a chart make sure it enhances the presentation. It is very frustrating when the chart is not clear and the reader spends a lot of time deciphering the chart.

Make sure the colors you use still convey the intended message after they are photocopied with a black and white copier or printed using a black and white printer. Red and blue are very striking colors, but will both photocopy black.

Slide 3

day two - afternoon

Course 7

Principles

- *Persuade, persuade, persuade*
- *Answer EVERY question*
- *Include right info for all audiences*
- *Make it an easy read*
- *Be efficient in writing report*

2

The goal in actuarial reports is to present a solution to a problem. Furthermore, it is to present a solution that will be understood and accepted by the intended audience of the report. The goal is to have the solution accepted by decision makers.

A common mistake that actuaries make is to not answer EVERY question that they were asked to address.

The goal of the report writing template outlined in the next few slides is to get the right amount (not too much OR too little) of information to everyone who might read even a portion of your report.

There are many ways to make a report an easy read. One way that will be discussed below is to put subheadings into your paper instead of having long stretches of prose with no breaks.

We will also suggest an approach to creating a report that will make efficient use of your time.

Slide 4

day two - afternoon

Course 7

Include Info for all Audiences

- *Executive Summary*
- *Introduction*
- *Data*
- *Model Selection*
- *Analysis of Results*

Body

- *Conclusions/Recommendations*
- *Appendices and References and/or separate file memorandum*

3

Do you have any questions or comments about this template for report writing? Can you think of situations you have been in where something else might be more appropriate?

In a few minutes we will talk about what goes into each section.

Slide 5

day two - afternoon

Course 7

Meet Every Reader's Needs

Reader	***What they will read***
Requesters of report	*Executive Summary*
With a little background	*Introduction*
Answer only people	*Body*
	Conclusions/Recommendations
Those in need of detail	*Appendices and References and/or separate file memorandum*

4

This slide illustrates the point that different readers will concentrate on different parts of the report. This template allows these various audiences to get out of the report what they want. If all these audiences read your report, this template is exactly what you needed! It is a brilliant way to allow you to communicate effectively.

Slide 6

day two - afternoon

Course 7

Efficient Process

- *Everyone has own approach*
- *Disorganized Brain Dump*
- *Organize – use time wisely*
  - List every issue, write intro
  - Assign each issue to body
  - Create subheading for each issue
  - Fill in answers to each issue (write body)

5

Brain Dump
The goal of the brain dump is that you don't lose track of any piece of information you have discovered in the project. There is an ancient technology called a dictaphone that allows you to talk in a disorganized way and record everything. Another task that can be completed during this time is to capture the data that was used and organize it into a format (perhaps a graph) that will be understandable to the reader.

Organize

List EVERY Issue, Write Intro
The introduction to your report should include the background of the assignment; that is, it should state the business issues that gave rise to the need for this report. A list of the questions or issues you were asked to address should also be included. Sometimes the questions are scattered throughout several documents. It is up to you to identify and package the questions in a useful or meaningful way. Often the key to a work project is determining what the questions really are. Make sure you list EVERY issue. The last thing in the introduction is a mini-table of contents to list the sections of the report that follow. That is all that is needed for the introduction.

Assign EVERY Issue
Next assign each issue that you mentioned in the introduction to the appropriate part of the body of the report (data, model, or analysis). There are certain issues that are relevant for almost every project:

Data:

- What process was used to select the data that was ultimately utilized?
- What was the source of the data? Was this an appropriate source?
- Were there any data quality issues? How were they addressed?
- Were there errors in the data? Were the errors corrected?
- To what extent do data issues limit the reliability of the work that follows?
- Did you summarize the data and draw appropriate conclusions?

Model:

- What process was used to select the model that was ultimately utilized?
- Were alternative models considered? If so, why was the model you selected the best among the available alternatives? If not, why not? What alternatives would you have liked to consider if time had allowed?
- Was the selected model appropriate? Why or why not?
- What are the limitations and advantages to the model?
- How long will this model be appropriate?
- How could the model be improved?

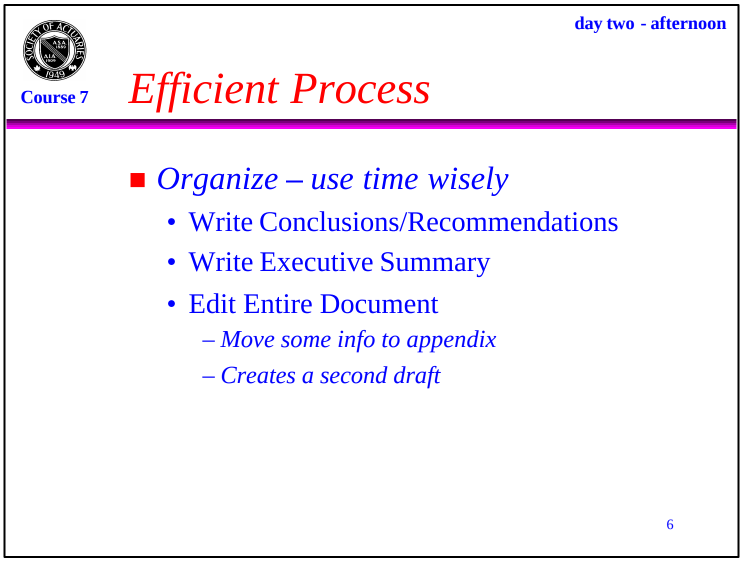
Analysis:

- What sensitivity analyses were performed?
- Were the results checked for reasonableness?
- Were the results complete and communicated in an understandable way?
- Will the results allow you to draw appropriate conclusions and recommendations?

Create Subheadings
Go into your word processor and first create the major headings for Data, Model, and Analysis. Then within each of these major headings type each of these issues in. Use something simple like an underline so that it is clear that these are subheadings. Eventually some of these issues might be combined in your document, but it doesn't hurt to start with each issue listed separately. These subheadings serve two purposes – they serve as a checklist to remind you what to think and write about, and they make your paper easier and quicker to read because a reader can scan the subheadings and read what interests them. .

Write First Draft of Body
If you can address all of these issues reasonably well you are on your way. Having each issue as a subheading will help you organize yourself and use your time wisely.

Slide 7



Write Conclusions/Recommendations Section

- Were appropriate conclusions and recommendations stated?
- Were the recommendations specific and actionable?

Write Executive Summary

- This should work as a stand alone document, telling the executive everything needed to make a decision.
- Therefore it should summarize the whole report.
- It should only include terminology that the audience understands.
- There are lots of, sometimes contradictory, ideas out there about how to write an executive summary. Some say that an executive summary should only be one page in length. Others say that you should never include a graph in the executive summary. Executive summaries are often situational; that is, they depend upon their audience. Any advice on how one writes an executive summary should take the context and particularly the audience into account. Remember that what is important is that the executive summary be a quick read and that it include all the details the executive needs and no more. It is more appropriate to have as a goal a quick read rather than a certain length. Not every one page document takes the same amount of time to get through.
- In many cases an executive summary should, at a minimum, state the problem/question, briefly outline the methodology used, answer the questions, and if appropriate, recommend action.

Edit Entire Document with the following goals in mind

- Is the work effectively communicated and appropriately documented?
- Is the report clear, concise and did the arguments and thoughts flow logically?
- Is the right amount of detail (not too much or too little) provided for the audience of the report?
- Did you use appendices appropriately? Recall that your work should be able to be replicated. Placing sufficient detail (either in the report of the appendix as appropriate) and excluding extraneous information will allow the audience to verify that the author understood the modeling process used to obtain the results.

Slide 8

Course 7

day two - afternoon

Other Reminders

- Peer Review
- Version Control
- Confidentiality
- Autosave

7

Make sure your work is reviewed, from the definition of the objective right through to the grammar in the final report. You should make it a routine part of your writing to have someone review what you write before it goes out.

It is advisable to rename every version of your report so you can keep track of your different versions. Never call anything a "final" version, because it rarely turns out to be the case!

If your report is confidential, make this very clear. Headers and footers are good ways to do this.

Slide 9

Course 7

day two - afternoon

Professional Standards of Written Report

- Document all major assumptions
- Detailed enough for other actuary (or other professional) to verify results
- Acknowledge responsibility

There are some professional standards that you as an actuary need to keep in mind. Even if they were not written into our standards I think they should be adhered to in any technical report.

Slide 10

day two - afternoon

Course 7

Formatting the Report

- *Do it last*
  - write it first
  - make it look nice later
- *Fonts*
  - save the fancy fonts for a purpose
  - don't distract from the message
- *Size*
  - font sizes between 10 and 12 are easy to read
- *Margins*
  - how will the document be bound?
  - very little white space is intimidating

I know formatting is more fun than writing – but you are rewarded (both in this seminar and in your professional life) for your thoughts – don't let your interest in formatting the report interfere with your thoughts.

Slide 11

day two - afternoon

Course 7

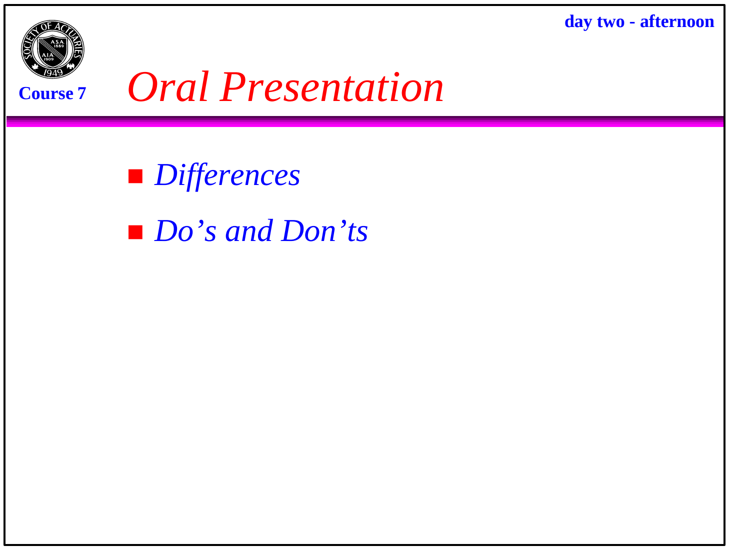
Copying Graphs/Tables

- *To Word or Power Point*
- *Always use paste special*
- *Use "Picture" option for Graphs/Graphics – uses less memory*
- *Use "Formatted or Unformatted Text" for tables of numbers*
- *Demonstrate Power Point to Word*

10

Demonstration: First, I scale the slide. Then I right click to format the picture. I choose layout, square. I then choose the 1 point lines.

Slide 12



There are differences between written and oral communication. Let’s discuss some differences and then some do’s and don’ts around oral presentations.

First how are they different, or are there any differences?

How about a list of do’s and don’ts: