

Appendix I: Guide for Preparation of Slides

1.0 Introduction

1.1 Purpose

Many PCs come loaded with a version of Microsoft Office®, which usually includes PowerPoint®. This software is intended for making slides that can be projected before audiences on a video projector or for a slideshow on a laptop or PC to small audiences. You can also use other means of preparing slides, but follow these general recommendations. All figures mentioned in this appendix can be found in Appendix II.

1.2 Scope

This appendix will only discuss how to make a classic, unanimated slide with a simple affiliation footnote. This is our recommended slide format for business and technical presentations. We will assume familiarity with word processing software.

1.3 Format

1. Making a slide template
2. Creating a word slide
3. Creating a table slide
4. Creating a photo slide
5. General recommendations

Title
Section head
Summary slides,
conclusions,
recommendations,
acknowledgments

2.0 Creating a Slide Template

Professionally-generated slides usually include the author's affiliation, department, the company logo, etc. in addition to the information on the slide (Fig. 1). These are usually in headers or footers, and the slide background may have a texture or color. Of course, many slide preparation packages have the capability to include animation, pop art, photos, etc., but usually these features detract from your message and are not recommended by AV professionals.

2.1 Selecting a Color

Choose a color that has high contrast to the text.

3.0 General Comments

Word slides are used for titles to show the elements of a presentation, to delineate sections of the presentations ("test results," "conclusions," etc.), to make statements, and to present ideas, actions, etc. The words need to have font sizes in the range of 30 to 45 points to be seen by the audience,

and they also need to be surrounded by sufficient "white space" to allow the eye to be drawn to the words. A "full slide" should not contain more than 70 characters of 45-point font or 120 characters of 30-point font. Assuming an average of 5 characters per word, this means only 24 words for 30-point font and 14 words for 45-point font. Text of any size should not exceed eight lines. Slides using font less than 30 points should be projected for readability in the anticipated venue. Thus, a proper slide should contain well chosen, limited words. Only ideas—only summaries.

3.1 Titles

A title is an abstract of your presentation. It must be brief. It is usually centered on the slide, and it should have the largest font size that you will use in the entire presentation (Fig. 2).

3.2 Background/Introduction

If you are to achieve your goal in making a presentation, you need to make that goal known to the audience—why are you giving this presentation, and what are your expectations of the audience. A "problem" statement is often appropriate (Fig. 3), followed by your purpose, objective, scope, and format (Figs. 4, 5, 6, and 7). Many times, photos and data can be used to fortify the "problem statement." However, keep introductory material to a minimum. The "meat" of the presentation should be in the body, not the introduction.

3.3 Section Heads

Most formal presentations need word slides to let the audience know what part of the presentation you are in. You presented the format in the introduction, now you need to just "flash" a word slide to say "now I will talk about "test procedure," or "test results," or "field studies," etc. (Figs. 8 and 9)." Let your audience know what you are talking about at all times, and keep discussions to the announced header.

4.0 Creating a Table Slide

There is always a temptation to copy and paste a big fat table that exists on your files on a slide. If it really is "big and fat," nobody will be able to read it. It will be meaningless. Try to avoid the use of tables because they usually require audience study and interpretation. If you must use a table, edit it so that it fits our font size and number of words guidelines (Fig. 10).

5.0 Creating a Graph

Most times a graph that is to be included in a presentation exists as a file. Import the file from an Excel® or a document file. The important part of making a graph slide is that it be large enough with fonts large enough to be seen by the au-

dience (Fig. 11). Never put more than one graph on a slide; avoid plotting multiple variables on a graph, and avoid colors that may be troublesome for color-blind people (red, green, yellow, etc.).

6.0 Creating a Photo Slide

Photos are useful for describing machines, techniques, sites, and all sorts of useful information (Fig. 12). They are imported into the slide, and the cautions for their use are the same as for graphs—usually only one per slide is advisable.

7.0 Creating a Line Art Slide

Most technical talks describe equipment or techniques that may be difficult to describe with words. Schematics (Fig. 13) are an excellent aid for helping the audience understand a test or device. These can be imported into your presentation from CAD drawings or other files.

7.1 Conclusions

Conclusions need to be succinct, usually bulleted statements deduced from your work (Fig. 14). Always ask yourself whether it is a “result” or a “conclusion.” Never restate results as conclusions. The result of a corrosion study is that the test material corroded. The conclusion is that “cobalt based cemented carbides cannot withstand continuous ex-

posure to saturated steam if the cobalt exceeds six percent.” Conclusions are global statements derived from test results.

7.2 Recommendations

Some presentations warrant recommendations—some do not. A presentation to an “information only” audience probably does not warrant them, but a presentation to your management probably does. They need to be very brief statements of action words. They should be bulleted or numbered if there are more than one (Fig. 15).

7.3 Acknowledgments

Like recommendations, sometimes acknowledgments are appropriate—sometimes they are not. Usually they are only appropriate for presentations of work that involved collaboration of multiple organizations or were funded by some governmental or institutional organization that wants their findings publicized (Fig. 16).

8.0 Summary

Keep word slides concise. Never use paragraphs. Never fill the field with words. Make word slides first, because they will be the bulk of your presentation, then do graphics and photos. Save the word slides (possibly in a separate file) in case your computer crashes in creating graphics or photo slides, which are more challenging.

Appendix II: Sample Presentation

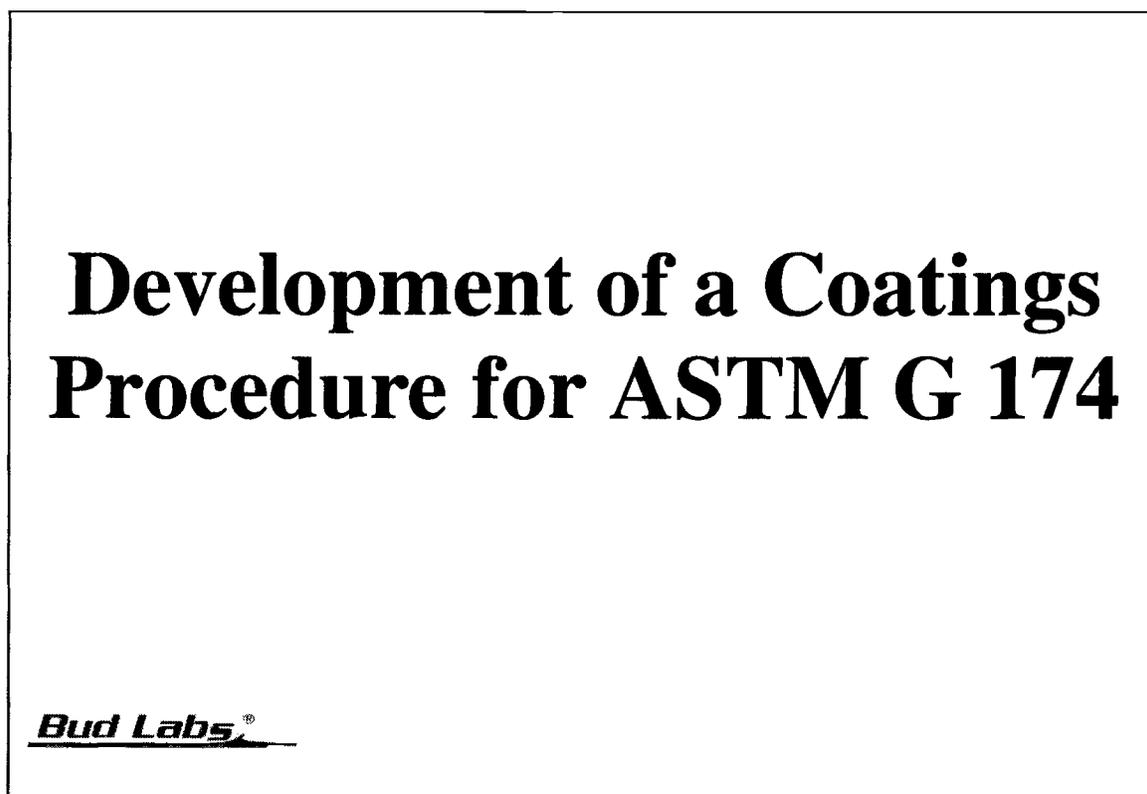


Fig. 1—Slide format with company logo.

Measurement of Friction in Rolling Element Bearings

Bud Labs[®]

Fig. 2—Sample title slide.

Problems

- **No standard test**
- **No published data from manufacturers**
- **Users must buy and try**

Bud Labs[®]

Fig. 3—Problem statement slide.

Purpose of Project

Develop a test to screen ball bearings for low friction

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Fig. 4—Purpose slide.

Objective of Paper

To promote an international standard for friction testing of rolling element bearings

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Fig. 5—Objective slide.

Scope of Work

- Tested only small diameter bearings (<10 cm)
- Tested bearings as received (with seals, grease, etc.)
- Only used the inclined plane test

Bud Labs[®]

Fig. 6—Scope slide.

Format of Presentation

- What is known about rolling friction
- Test development
- Interlaboratory standardization tests
- Test results
- Conclusions

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Fig. 7—Talk format slide.

Test Development

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Fig. 8—Section head slide.

Test Results

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Fig. 9—Section head slide.

Recommendation:

Proposed Revisions To The ASTM G 174 Loop Abrasion Test Method

Procedure	Abrasive Type	Abrasive Size (mm)	Spindle Speed (rpm)	Loading mass (g)	Test Duration (passes)	Number of abrasive loops used
a For uncoated metals	Al ₂ O ₃	30	300	200	680	1
b For thin (<250 μm) hard coatings	Al ₂ O ₃	3	100	100	680 or to penetration	1
c For thick (50 to 2500 μm) thermal spray or plated coatings	Al ₂ O ₃	30	100	100	75 or to penetration	1
d For uncoated cemented carbides, cermets, ceramics	Al ₂ O ₃	30	100	100	80	4 (Fresh every 20 passes)

Bud Labs®

Fig. 10—Table slide.

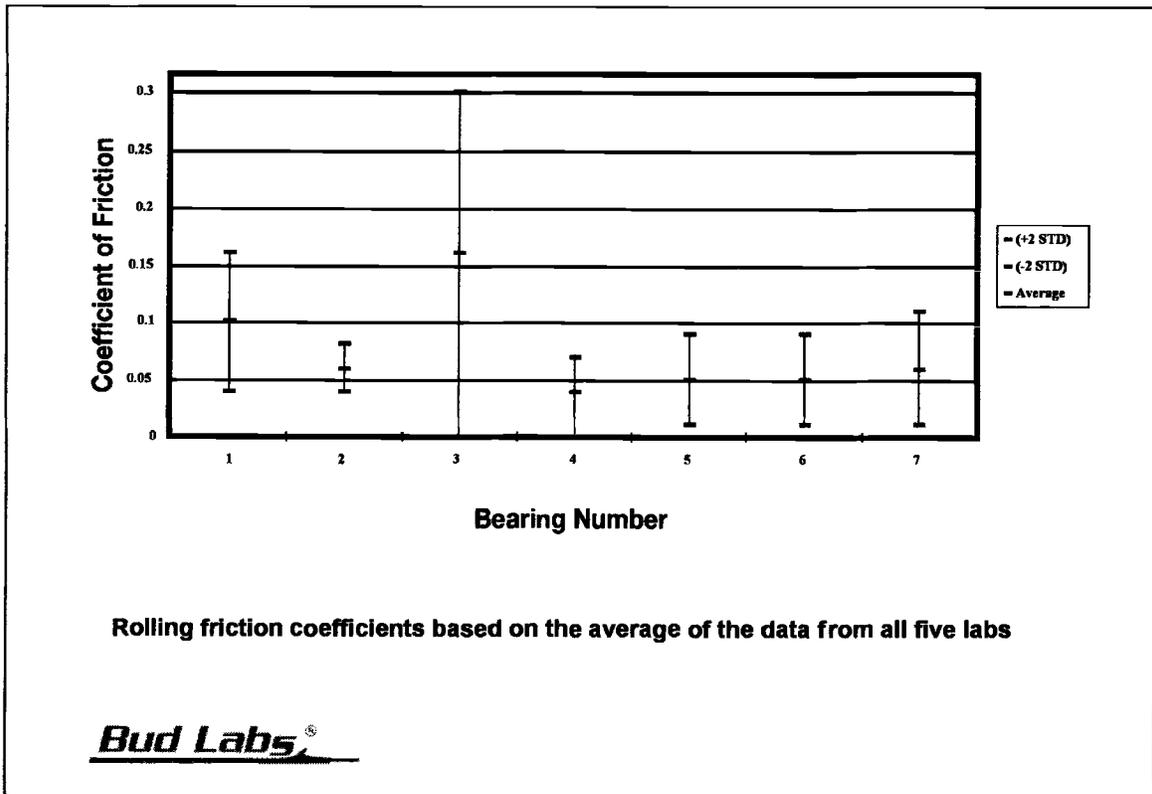
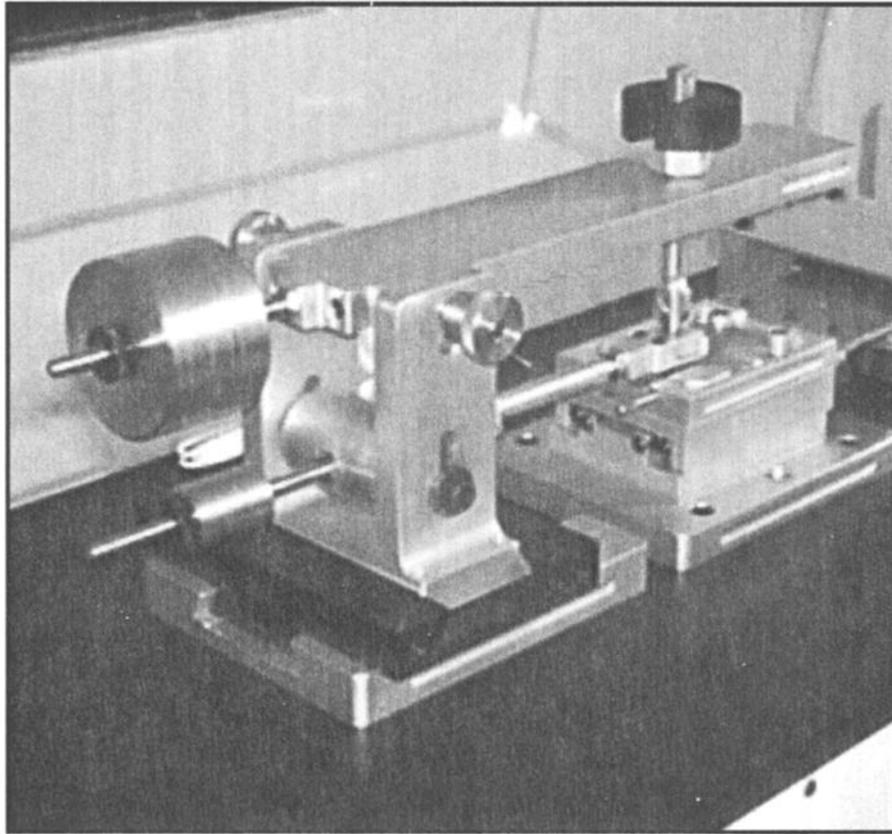


Fig. 11—Graph slide.



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Fig. 12—Photo Slide.

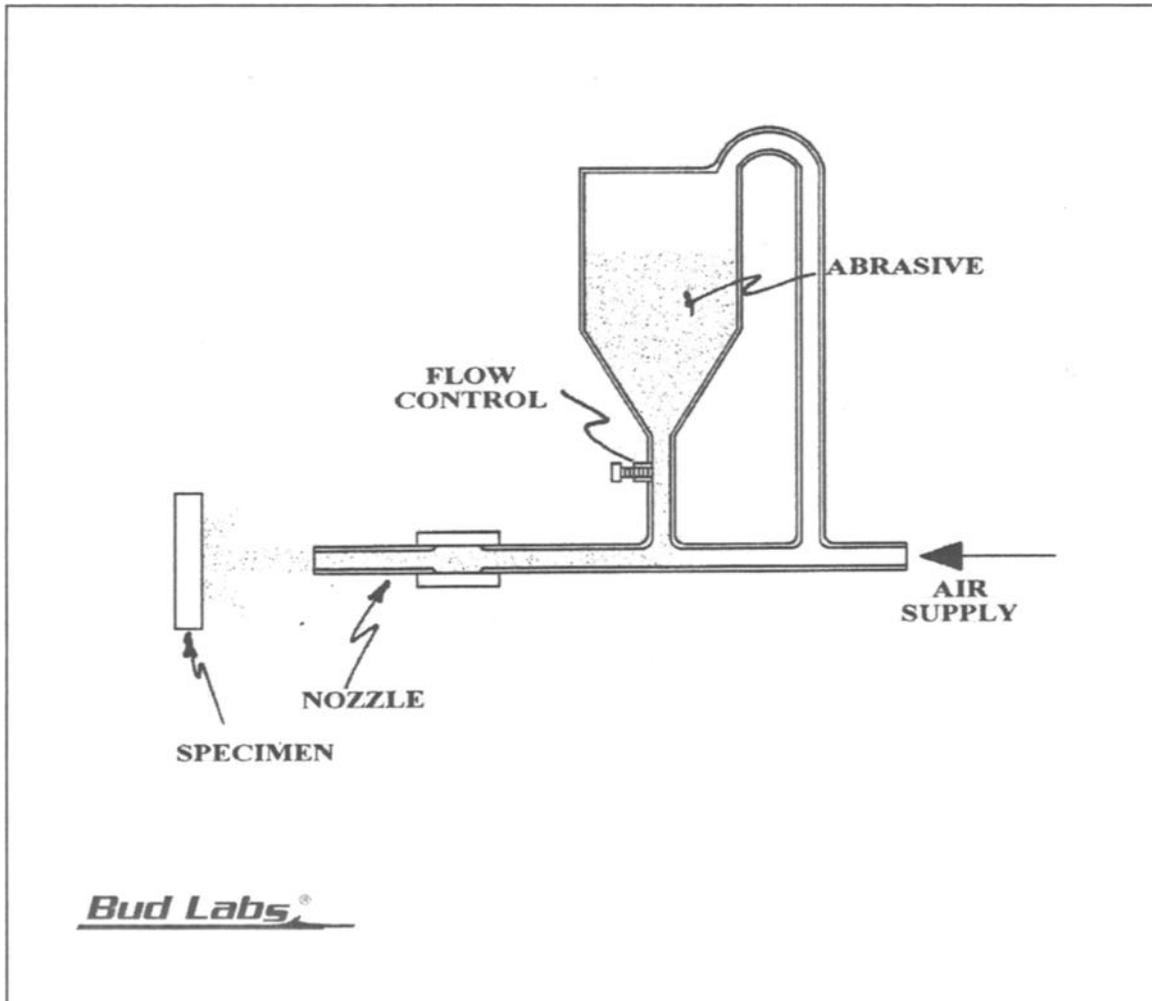


Fig. 13—Schematic slide.

Conclusions

- **The test is feasible**
- **Test variability is acceptable (but lab dependent)**
- **The test ranks bearings correctly from low to high friction**

Bud Labs[®]

Fig. 14—Conclusion slide.

Recommendations

1. Use the loop abrasion test for product qualification.
2. Include test data in product data sheets.

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Fig. 15—Recommendation slide.

Acknowledgment

The New York State Manufacturing Initiative Office under contract #29049 funded this work. We also thank the Ithaca Research Labs for their assistance with our microscopy studies.

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Fig. 16—Acknowledgment slide.

Appendix III: Presentation Checklist—Things to Consider in Preparing and Delivering a Technical Presentation

Strategy:

1. Who asked for the talk? _____
2. Who will be your audience? _____
3. What do you expect to achieve by your talk? _____
4. How will your presentation present value to your audience? _____
5. Where will your talk happen? _____
6. When will your talk happen? _____
7. Will you be able to use slides? _____
overheads? _____
chalkboard? _____
all of the above? _____
other? _____
- No AV equipment? _____
- PA system? _____
8. How long can you speak? _____
9. Do you need a handout? _____
talk on CD? _____
talk on computer file? _____
other documentation? _____
10. What is your overall strategy for this presentation? _____

Audience Accommodation:

1. What is the composition of your audience? _____
2. What will interest them? _____
3. What "level" should your presentation be? _____
detailed? _____
general? _____
theoretical? _____
basic? _____
other? _____
4. What visual aids are appropriate for this audience? _____

5. Can your visual aids be seen by all? _____
6. Will you be heard by all? _____
7. Is there anything in your presentation that might offend (or blame) anyone in your audience? _____
8. If you are expecting action from audience members, have you made this clear? _____
9. Have you included basic presentation elements? _____
format? _____
agenda? _____
introduction? _____
body? _____
conclusions? _____
recommendations? _____

10. What will you do to control your time limit? And the time limit of others (for meetings)? _____

11. How do you plan to include the audience in your presentation? _____

Researching Your Subject:

1. Is your title an abstract of your talk? _____
2. Where did you get the information that you will present? (Tell your audience)
your work? _____
work of others? _____
3. How certain are you that the facts and figures that you will present are correct? _____
very certain? _____
somewhat certain? _____
not certain? _____
4. Have you researched the literature on your subject? _____
5. Do you have a list of references for those who want to "dig deeper?" _____
6. Have you established the level of detail that is appropriate for your audience? _____
7. Have you established a time budget for each element of your talk? _____
8. Are you completely comfortable with your thesis? _____

Presentation Preparation:

1. Have you merged your strategy, audience information, and research into a presentation outline? _____
purpose? _____
objective? _____
scope? _____
format? _____
sections? _____
2. Do you know what you are going to say? _____
3. Will visual aids assist your thesis? _____
4. What kind? _____
slides? _____
overheads? _____
computer? _____
charts? _____
chalkboards? _____
other? _____
5. Did you storyboard your slides? _____
6. Have you checked slide font size for audience readability? _____
7. Do you have any cluttered or illegible slides? _____
more than 50 words? _____

- more than 1 graph? _____
 more than 1 photo? _____
 paragraphs? _____
 less than 30 point text? _____
 too much adornment? _____
 not enough clear space? _____
8. Have you projected your slides and viewed them from the farthest point in your audience? _____
 9. Does your talk contain facts, not conjecture? _____
 10. Have you told your audience. . . .
 Why you did the work? _____
 What they will hear? _____
 What subject you are addressing at all times? _____
 11. Have you had your finished presentation reviewed by a trusted peer? _____
 12. Have you addressed acknowledgments? _____
 13. Do you have a ready-reference/outline to use during your presentation? _____

Intellectual Property/Legal Considerations:

1. Does your talk leak secrets or inappropriate information? _____
2. Does your talk or visual aids use information copyrighted to others? _____
3. Do you have permissions for use of copyrighted material? _____
4. Have you considered all ramifications (business, legal, friendship, etc.)? _____

Visual Aids Review:

1. Have you had another person proofread all text, charts, graphs, etc.? _____
2. Have you queried the need for each slide/aid? _____
3. Do your visual aids support your thesis? _____
4. Do your slides look neat? _____
5. Can each slide pass the "person on the street" test for understandability? _____

6. Are you using tables that cannot be simplified as a graph, etc.? _____
7. Do you have text slides to delineate parts of your talk (procedure, test program, test results, etc.)? _____
8. Do your slides use strange fonts? _____
 If so, why? _____
9. Are your slides cluttered with distracting features? _____
 clip art? _____
 excess texture? _____
 hard to see colors? _____
 too dark background? _____
10. Are your graphs simple (per person on the street test)? _____
11. Do your slides summarize, or are they "all the data"? _____
12. Do your charts and graphs contain suitable captions? _____
13. Have you considered color blind attendees in choice of colors? _____

Making Your Presentation:

1. Have you checked the facilities in the presentation venue? _____
2. Have you practiced your presentation? _____
3. Is your presentation within your time allowance? _____
4. Do you have a control program in place for your nervous tics (uhs, you know, ok, etc.)? _____
5. Do you need to talk slower to accommodate audience members with a different first language? _____
6. Do you have an eye contact strategy? _____
7. Do you have appropriate dress available for your presentation? _____
8. How will you keep to your allotted time? _____
9. Are you prepared for questions? _____
10. Is an evaluation appropriate, or will there be one? _____
11. How will you get feedback on your presentation? _____

IV

Appendix IV: Suggestions from AV Professionals on Slide Preparation (from various sources)

- Use horizontal format (landscape) for all slides.
- Allow white space (border on top, bottom and sides) around substance of the slide.
- Color backgrounds only with pale colors (pale yellow, very light blue, light gray etc.).
- Use a single dark color for words.
- Use only one graphic (photo, graph, sketch etc.) per slide.
- Use “Times” font for word slides.
- Use Helvetica font for graphs.
- Avoid tables.
- Consider colorblind audience members when preparing slides. Most cannot see red on black, yellow on blue, line art with red and green lines. (Also, color blind people cannot usually see the red dot from laser pointers—use a mouse arrow.)
- Make titles bold.
- Use a minimum of 24-point font for word slides.
- Use only uppercase and lowercase lettering.
- Limit text to eight lines per slide.
- Use italics for subtitles and keywords.
- Place presenter’s name and affiliation in small font in the bottom left hand corner of each slide.
- Number slides in small font: (page ___ of ___) in bottom right corner of slide if they are to serve as a handout.