TECHNICAL
PRESENTATIONS

Advanced Communication Series

THE TECHNICAL BRIEFING

EXECUTIVE SUMMARY:

Briefings are speeches to inform. To make your briefing effective: Match your use of technical material to the knowledge level of your audience. What do you want your audience to know or be able to do after your briefing? Focus your presentation by stating its purpose in a single sentence. Select supporting material to match your objective, main message, and the audience's needs.

OBJECTIVES:

▶ Using a systematic approach, organize technical/specialized material into a concise presentation.

▶ Tailor the presentation to the audience's needs, interests, and knowledge levels.

Time: Eight to 10 minutes

What is a technical briefing? In most instances, it's a straightforward speech in which the speaker communicates specialized, procedural, or scientific information to a critical audience. The briefing is the most common kind of speech presented in today's workplace.

PROVIDING PERTINENT FACTS TO BUSY PEOPLE

There are various formats for briefings, but most are speeches to inform. Briefings provide and explain important facts in a way that allows the audience to quickly grasp and apply those facts. Examples include:

▶ An engineer briefs a group of managers on a current project

▶ A health official briefs the public on a recent pandemic

▶ A marketing executive presents a briefing on a product test

▶ A line manager briefs a division chief on production progress

▶ A supervisor explains a new company policy to subordinates

▶ A lobbyist briefs lawmakers on the expected impact of proposed legislation

In this project you'll have an opportunity to deliver a briefing, using technical information relating to your career, profession, or even your hobby.

BE SYSTEMATIC

A major reason that technical presentations fail or are ineffective is the presenter's unwillingness or inability to invest time in preparation. A technical briefing, like any speech, should start with careful planning and proceed, step by step, toward a stated goal. The following outline will help you prepare an effective briefing:

1. Analyze your audience.

2. State your objective.

3. Define your main message and support it.

> **Briefings provide and explain important facts in a way that allows the audience to quickly grasp and apply those facts.**

ANALYZE YOUR AUDIENCE

To design a briefing that is on target, you must carefully consider your prospective audience.

▶ Who are the people?

▶ What are their backgrounds?

- How much information do they already have about your subject?
- What information are they looking for?
- What are their needs?

Time is the most precious asset a busy person has. Avoid jargon or highly technical material that your listeners don't understand. Likewise, don't waste the audience's time explaining information that they already know. Careful audience analysis will help you avoid these pitfalls and ensure that your briefing is time well spent for you and your audience.

STATE YOUR OBJECTIVE

In this step you must determine the result you want your presentation to achieve. What do you want the audience to know or be able to do as a result of your presentation?

DEFINE YOUR MAIN MESSAGE AND SUPPORT IT

What is the purpose of your presentation? State it in a single sentence. This sentence will serve as the focal point for your entire presentation, and should recur throughout your talk.

> Your guides in selecting your material for presentation are your objective, your main message, and the needs of your audience.

Your guides in selecting your material for presentation are your objective, your main message, and the needs of your audience. Try to select only three or four primary points that support your main message, and state each one in a single sentence. To finish your briefing, summarize the main points you've presented, and include any conclusions you have made clear in relation to them.

Suppose that as a manager of an engineering division you've been asked to brief a new vice president on your division's function and activities. Also on hand will be several key members of the vice president's staff. Your objective, main message, and primary points may be:

Objective:

- The vice president will understand the division's role in product development and quality assurance.

Main Message:

- The division is developing five new products while testing existing products for quality.

Primary Points:

- We participate in the design of future products.
- We test all new products that are in the development stage.
- We regularly test all existing products to ensure quality.

Arrange your material into an outline containing an introduction, body, and conclusion. State your main message early in the speech, reinforce it throughout the briefing, and then restate it in your conclusion.

YOUR ASSIGNMENT

Prepare and deliver an eight- to ten-minute briefing. It should contain specialized information drawn from your career, profession, or hobby that is aimed at the interests and knowledge levels of your audience. Follow the outline presented in the project. Don't neglect effective delivery – employ body language, vocal variety, and enthusiasm to make your speech meaningful and interesting. Your opening should capture attention, stimulate audience interest, and state your main message. Include a few primary points that support this message and illustrate them with appropriate examples and data. Your goal in presenting this briefing is to create understanding among your listeners and every aspect of your speech should reflect this.

EVALUATION GUIDE FOR **THE TECHNICAL BRIEFING**

Title _____

Evaluator _____ Date _____

Note to the Evaluator: In this presentation, the speaker is asked to deliver an informative briefing containing specialized material. This information should be tailored to the needs, interests, and knowledge levels of the audience, and should be presented clearly and logically. All aspects of the speech should support a single main message. It is suggested you read the entire project before the speech.

In additional to your verbal evaluation, please complete this evaluation form by assigning a rating in each category, then making comments in the space on the right. Comment only where special praise or specific recommendations for improvement are appropriate.

COMMENTS/RECOMMENDATIONS

▶ In your opinion, was this speech interesting?
  EXCELLENT   SATISFACTORY   SHOULD IMPROVE

▶ Was the technical material suitable for the interests and knowledge levels of the audience?
  EXCELLENT   SATISFACTORY   SHOULD IMPROVE

▶ Did the speaker state his/her main message at the onset of the briefing?
  EXCELLENT   SATISFACTORY   SHOULD IMPROVE

▶ Did the points and support data contribute to understanding and acceptance of the main message?
  EXCELLENT   SATISFACTORY   SHOULD IMPROVE

▶ Was the technical material presented concisely and logically?
  EXCELLENT   SATISFACTORY   SHOULD IMPROVE

▶ Did the speaker's delivery enhance the overall presentation effectiveness?
  EXCELLENT   SATISFACTORY   SHOULD IMPROVE

EXECUTIVE SUMMARY:

Your proposal must stimulate action or acceptance of an idea. Follow four steps: Determine your purpose, analyze your audience, state and support your main message, and urge the audience to take action. Translate features into audience benefits. Use the inverted pyramid format. Be sure your visual aids support your objective and main message. Plan to deal with audience questions effectively.

OBJECTIVES:

▶ Prepare a technical presentation advocating a product, service, idea, or action.

▶ Present your viewpoint logically and convincingly, using an inverted-pyramid approach.

▶ Effectively use Microsoft PowerPoint with a laptop computer to illustrate your message.

▶ Effectively handle a question-and-answer period.

Time: Eight to 10 minutes for speech; three to five minutes for Q&A

THE PROPOSAL

Another kind of speech technical professionals frequently present is the proposal. A proposal is similar to a briefing, but it adds the element of advocacy. It might be considered a persuasive briefing.

While the purpose of most briefings is to inform, a proposal seeks to stimulate action or acceptance of an idea. Here are some examples:

▶ An architect presents design recommendations for a planned condominium development.

▶ The director of an advertising agency proposes an ad campaign to a prospective client.

▶ Your neighbor proposes establishing a neighborhood watch program.

▶ A project manager explains the advantages of his proposal to government officials in an effort to win a contract.

▶ You propose to the city council that the city install a traffic signal in an intersection where many accidents have occurred.

In all of these cases, the information being presented is specialized. Yet the objective of the presentation is to promote a product, a concept, or a set of recommendations. By combining your technical expertise with the ability to present proposals that get positive results, you'll generate many opportunities for visibility and career advancement.

WHAT ARE YOU PROPOSING?

Prepare your proposal using these four steps:

> **A proposal seeks to stimulate action or acceptance of an idea.**

1. **Determine your purpose.** What do you want your presentation to accomplish? Are you selling a product or service? Recommending a course of action? Striving for agreement or approval?

2. **Analyze your audience and determine its needs.** Create your message to specifically address the audience's wants and needs. For example, a company wants their employees to be able to communicate more effectively so they can be better team leaders in their departments. Your presentation would demonstrate the features that meet the audience's needs but also would translate the features into audience benefits. For example:

   - **Feature:** One feature of the Toastmasters learning program is that members write and present speeches.

- **Benefit:** Developing critical thinking skills, building communication skills, and practicing effective presentation delivery are the benefits that people receive from Toastmasters membership.
- **Value:** The value of Toastmasters membership to the company is that their employees have increased communication skills and self-confidence which results in better department team leaders for the company.

3. **State your main message and support it.** If your objective is to persuade a large corporation to purchase your company's copy machines, what would your main message be? Would it be that your company has developed a new photographic process? That your computerized service network is the best in the industry? That your products are more cost effective than competitors'? Of course you will include these features in your proposal. But how do you translate these features into benefits for the company?

- Better copies in less time will enhance the company's image
- Fewer delays in processing paperwork
- The company will save money.

4. **Urge the audience to take definite action.** You have created the support for a powerful concluding statement urging the audience to buy your product for their benefit.

> The inverted pyramid format for organizing ideas places essential infomation in the beginning of a story or presentation so the presenter has the flexibility of cutting it at any point withouth losing the main message.

INVERTED PYRAMID

The inverted pyramid format for organizing ideas places essential information in the beginning of a story or presentation. This gives the presenter the flexibility of cutting it at any point without losing the main message.

In organizing your proposal, you begin with your main message, followed by the supporting points and detailed data. If your listeners agree with your main message, the supporting material that follows will reinforce their agreement. If they disagree, they will be focused on your viewpoint from the beginning, and your logic may win them over to your side.

USING VISUAL AIDS

Visual aids are standard equipment in most technical presentations. Effective visuals can illustrate and clarify your verbal message. On the other hand, poor or poorly presented visual aids can seriously damage your proposal and create a negative impression with the audience. In building your project, pay special attention to creating visuals that support your objective and main message.

Visual aids must be clearly visible to each person in the audience. They must be simple, with each one illustrating a single point. And they must be legible so the audience can clearly understand what's being shown. Remember, your purpose in using visuals is to promote understanding.

Because your PowerPoint presentation will be completed prior to your talk, and therefore "fixed" as a visual aid, you may wish to supplement your visual tools with a flipchart. This can help when you have new information you want to reinforce visually, which is likely to happen when answering questions at the end of your presentation.

For extensive tips on using visual aids, refer to the appendix.

HANDLING QUESTIONS AND ANSWERS

A question-and-answer period following your speech benefits both you and your audience. It provides you with feedback indicating to what extent your listeners accept and agree with your proposal. It also lets you reinforce your message by addressing areas that concern the audience.

And it benefits your listeners by giving them an opportunity to get clarification of ideas and data in your proposal.

Here are some tips for effectively dealing with audience questions:

1. **Plan for them.** Announce at the outset of your speech that you will entertain questions. Plan a smooth transition between the conclusion of your proposal and the question-and-answer portion of the presentation.

2. **Anticipate questions.** Try to anticipate the questions your audience will ask. One way is to rehearse your proposal before colleagues or friends and see what questions they have. This has an added benefit: It can indicate elements you've neglected to include in your proposal.

3. **Clarify the question.** Before attempting to answer a question, be sure you understand what the questioner wants. If necessary, rephrase, asking if your interpretation is correct. If you don't know the answer, admit it, but tell the questioner you will find out the answer later and contact him or her.

4. **Don't be defensive.** Give your listeners the impression you welcome their questions and appreciate the opportunity to answer them. Your positive attitude can be the "icing on the cake" for a successful proposal.

5. **Align your answer with your main message.** Rather than blurting out the first response that comes to mind, mentally evaluate how you can answer the question in a way that supports what you've said in your proposal.

6. **Disarm questions charged with hidden implecations.** Occasionally a questioner may ask a question based on false premises or irrelevant assumptions to discredit your statements. Be polite, but don't change your position. You can disarm the questioner by asking him or her to explain the question and share information.

7. **Divert irrelevant questions.** Don't waste time on questions that are out of place, even if you know the answers. Politely ask the person how the question bears on the proposal.

8. **Divide complex questions.** If a questioner hits you with a multifaceted question, split it into components before answering it. This helps you, as well as other listeners.

9. **Summarize.** Watch your allotted time. Before it expires conclude by briefly summarizing your proposal. This way, you can control (and prepare for) the way your presentation ends. This is the final impression you leave on your audience, so make it positive and optimistic.

YOUR ASSIGNMENT

Using technical material drawn from your hobby or profession, design a proposal that advocates a product, service, idea, or course of action. If you wish your fellow members to play a role, have the Toastmaster of the meeting explain the situation in advance.

Develop a main message expressed in terms of its benefits to the audience. Present your recommendation at the beginning of your speech, and then support it with key points, examples, and data. Following your eight- to 10-minute proposal, spend three to five minutes answering questions, and then present a brief but strong summary of your message. Use visual aids; your visuals may include key points, simple charts or graphs, or a combination of these.

EVALUATION GUIDE FOR **THE PROPOSAL**

Title _____

Evaluator _____ Date _____

Note to the Evaluator: This project calls for a technical presentation that advocates a product, service, idea, or course of action. The speaker has been asked to use an inverted-pyramid approach, putting his/her viewpoint at the beginning, then supporting it logically and convincingly. The speaker was also expected to conduct a question-and-answer period at the conclusion of the proposal. Visual aids (of the speaker's choice) are recommended. It is suggested you read the entire project before hearing the speech.

In addition to your verbal evaluation, please complete this evaluation form by assigning a rating in each category, then making comments in the space on the right. Don't comment on each category – only those where special praise or specific recommendations for improvement are appropriate.

COMMENTS/RECOMMENDATIONS

▶ Was the speaker's main message clearly stated in terms of audience benefits?
EXCELLENT   **SATISFACTORY**   **SHOULD IMPROVE**

▶ Did the speaker clearly and logically support his/her main message?
EXCELLENT   **SATISFACTORY**   **SHOULD IMPROVE**

▶ Did the speaker state his/her main message at the onset of the briefing?
EXCELLENT   **SATISFACTORY**   **SHOULD IMPROVE**

▶ Was the proposal appropriate in intent for the audience?
EXCELLENT   **SATISFACTORY**   **SHOULD IMPROVE**

▶ Was the proposal organized according to the "inverted pyramid" method?
EXCELLENT   **SATISFACTORY**   **SHOULD IMPROVE**

▶ Did the speaker effectively deal with audience questions?
EXCELLENT   **SATISFACTORY**   **SHOULD IMPROVE**

▶ During Q and A, did the speaker respond in a way that supported the main message?
EXCELLENT   **SATISFACTORY**   **SHOULD IMPROVE**

▶ How effective were the visual aids?
EXCELLENT   **SATISFACTORY**   **SHOULD IMPROVE**

▶ Was the speaker's delivery as effective and convincing as his/her content?
EXCELLENT   **SATISFACTORY**   **SHOULD IMPROVE**

THE NONTECHNICAL AUDIENCE

EXECUTIVE SUMMARY:
To interpret the world of high technology for an audience that lacks technical training, you must first capture their interest and prove that the material is significant to them. Build their understanding by making your tech talk simple and clear. Develop rapport, credibility, and trust to gain their acceptance. Make it memorable and stimulate the audience to action.

OBJECTIVES:

▶ Understand the principles of communicating complex information to nontechnical listeners.

▶ Build and deliver an interesting talk based on these principles.

▶ Answer audience questions that arise during the presentation.

▶ Use a Microsoft PowerPoint slideshow to illustrate your message.

Time: 10 to 12 minutes

The realms of science and technology, to many people, are baffling. These people aren't necessarily unintelligent; they merely lack technical training. Yet they may suffer feelings of helplessness and inadequacy as their lives are affected by processes they don't understand.

Space exploration, computers, nuclear power, acid rain, toxic wastes, air and water pollution are realities that many non-technical people need and want to comprehend. For some, it's a professional necessity. Others merely crave knowledge about the world in which they live.

This project addresses interpreting the world of high technology to a nontechnical audience. Learning to speak effectively in the intermediary role can build your visibility, place you in high demand as a speaker, and advance your professional standing.

UNRAVELING "HIGH-TECH" MYSTERIES

Your purpose in presenting technical material to a nontechnical audience may be simply to inform. Or you may seek to persuade, to build support for your position, or to generate action on the part of your listeners.

This brand of technical presentation has a unique set of priorities for the speaker. Generally, how you present your material is more important than your topic. Unlike other technical presentations, where it's preferable to put your conclusions and findings first, you begin this speech by striving to capture your audience's attention and interest. It's okay to "tell them what you're going to tell them," but your initial focus

> **Your initial focus should be on getting your listeners interested in your topic and showing them how it relates to them.**

should be on getting your listeners interested in your topic and showing them how it relates to them. Once you've accomplished this vital objective, the audience will listen to details and try to understand them.

ILLUSTRATING WITH POWERPOINT

Make one main point per slide, label it clearly, and include appropriate images. Use graphics, like arrows, to point out important parts of photographs. Keep math as simple as possible. For equations, consider using a flipchart or other media. If you must use PowerPoint, break down an equation, step by step, across several slides. For more information on PowerPoint, see the appendix.

STRUCTURING YOUR APPROACH

Here is a six-step priority list for effectively presenting technical material to a nontechnical audience:

1. **Get their attention.** For this talk to be successful, you must seize your audience's attention and keep it throughout the presentation. You do this by being lively,

animated, and enthusiastic. Use visuals that are bold and simple. If showmanship isn't your style, don't attempt it. But avoid monotony; bored listeners become non-listeners.

2. **Win their interest.** This step is closely related to the first; both are vital. The key to getting people interested in your speech is showing them that your subject is both relevant and important to them. As in any speech, you should be sensitive to your listeners' needs and approach the communication situation from their point of view – not yours.

3. **Build understanding.** If your presentation is to be more than just a pleasant diversion for your audience, this is the step that warrants the greatest care in your preparation. Here is where you make the complex simple and the esoteric mundane. Use everyday language. Avoid jargon. If you must use technical words, define them clearly. Use short, crisp sentences with active verbs. Use examples, analogies, and comparisons to clarify your points and make technical material simple. Structure your speech according to a clear, logical outline that flows easily from point to point. Concentrate on making smooth transitions that connect your points into a logical whole. Don't expect your listeners to draw their own conclusions; you'll need to make those transitions for them.

> Avoid jargon. Use everyday language and short sentences with active verbs to build understanding.
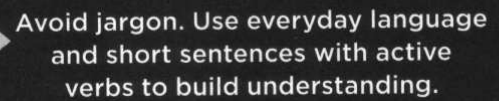
Here's an example that illustrates the use of comparisons and a smooth transition between statements: "This space vehicle uses more fuel during liftoff than you will use in your lifetime. That much fuel weighs more than this building. As a result, it takes a tremendous amount of propulsion to lift the vehicle off the ground." This type of structure builds understanding without insulting people's intelligence.

Another key to helping people understand is your ability to monitor feedback during the presentation. In most technical presentations, it's advisable to wait until the end to handle audience questions. But in a presentation to a nontechnical audience, it helps both you and your listeners if you invite them to ask questions at any point. Otherwise, you may lose your audience.

4. **Gain acceptance.** If your purpose is to inform, you've accomplished it once you've built understanding. But if you seek to persuade or to stimulate attitudinal or behavioral change, you must do more. Getting people to accept and believe your viewpoint involves building rapport, credibility, and trust. To enhance rapport, you should convince the audience you're like them; self-directed humor, if you can do it effectively, may help. Credibility and trust are usually functions of who you are – the quality of your credentials. Since it's usually inappropriate for you to state your qualifications, a good introduction by someone else is vital. Finally, your ideas and your reasoning must make sense. If your audience is likely to be exposed to objections or counter-arguments, you'll need to recognize and dispose of them.

5. **Help them remember.** Making your message memorable is largely a function of the steps already discussed. If your listeners are to remember what you've said, they must understand it. They must be convinced your subject is important to them. In addition, you can enhance retention by using visuals that illustrate and clarify – people remember much more of what they both hear and see than what they hear alone.

6. **Stimulate Action.** People are most likely to take action if it's both specified and feasible. Tell your audience exactly what you want them to do; vote a certain way, sign a petition, make a contribution, etc. The action should be relatively easy and available immediately. And finally, the action you propose should meet their needs. Of course, it's up to you to convince them this is the case.

YOUR ASSIGNMENT

Plan, prepare, and deliver a 10- to 12-minute speech in which you convey technical information drawn from your career or profession to a non-technical audience. If yours is a company Toastmasters club or one in which your fellow members share your technical expertise, this project may require them to role play. Be sure they are notified of this in advance.

For this project, use a laptop or desktop computer, a data projector, and a Microsoft PowerPoint slideshow to illustrate your message; you'll find tips for using them effectively in the back of this manual. Also, notify the audience beforehand that you will accept questions at any time during your presentation. To avoid running over your time limit, you'll have to make your answers brief and direct.

EVALUATION GUIDE FOR **THE NONTECHNICAL AUDIENCE**

Title _____

Evaluator _____ Date _____

Note to the Evaluator: For this project the speaker is asked to deliver an interesting speech, in which complex information is conveyed to a nontechnical audience. The speaker should entertain audience questions as they arise during the presentation, and use PowerPoint slides as visual aids. It is suggested you read the entire project before hearing the speech.

In addition to your verbal evaluation, please complete this evaluation form by assigning a rating in each category, then making comments in the space on the right. Don't comment on each category – only those where special praise or specific recommendations for improvement are appropriate.

COMMENTS/RECOMMENDATIONS

▶ Topic selection (interesting, relevant)
EXCELLENT   SATISFACTORY   SHOULD IMPROVE

▶ Absence of complexity (easy to understand)
EXCELLENT   SATISFACTORY   SHOULD IMPROVE

▶ Opening (attention-getting)
EXCELLENT   SATISFACTORY   SHOULD IMPROVE

▶ Organization (clear, logical)
EXCELLENT   SATISFACTORY   SHOULD IMPROVE

▶ Support material (examples, comparisons that clarify and simplify)
EXCELLENT   SATISFACTORY   SHOULD IMPROVE

▶ Transitions (smooth, easy to follow)
EXCELLENT   SATISFACTORY   SHOULD IMPROVE

▶ Language (simple, without technical jargon)
EXCELLENT   SATISFACTORY   SHOULD IMPROVE

▶ Responses to audience (questions answered simply and directly)
EXCELLENT   SATISFACTORY   SHOULD IMPROVE

▶ Visual aids (bold, simple, visible, smoothly handled)
EXCELLENT   SATISFACTORY   SHOULD IMPROVE

▶ Delivery (vocal variety, body language, etc.)
EXCELLENT   SATISFACTORY   SHOULD IMPROVE

EXECUTIVE SUMMARY:

You have been invited to present a technical paper to colleagues at an association conference. Role play an author's presentation with a borrowed technical report or a paper you have written. Give your verbal report, sharing ideas, experiences, and findings in a format used by leading technical associations. Make your presentation interesting, well-organized, and informative. Do not read your paper aloud. Keep your talk clear, logical, and objective.

OBJECTIVES:

▶ Deliver an interesting speech based on a technical paper or article.

▶ Effectively use a Microsoft PowerPoint slideshow to illustrate your theme.

▶ Provide additional information, such as answers to questions, using a flipchart.

Time: 10 to 12 minutes

This is not a book report, but a presentation sharing pertinent information with colleagues.

PRESENTING A TECHNICAL PAPER

Every year, legions of engineers, scientists, managers, and other professionals attend conferences sponsored by various technical organizations. The primary purpose of these associations is to circulate technical information that will benefit their particular fields and the people who work in them. If you're a techncal professional, chances are good that you belong to one or more of these organizations.

Most technical associations publish technical papers written by professionals in their fields. The authors are then invited to present their papers verbally to peers and colleagues at the associations' conferences.

A REWARDING CHALLENGE

Whatever your professional field may be, writing a technical paper can be a highly satisfying experience. It lets you contribute to your profession's body of knowledge. This, in turn, can add greatly to your professional visibility and stature.

In this project you will share ideas, experiences, and findings in a format that simulates those used by leading technical associations. You will not have to write a paper. Instead, you may select a technical paper or magazine article and deliver a verbal presentation based on it. Keep in mind, this is not a book report, but rather a presentation aimed at sharing pertinent information with your colleagues. You are reporting on the findings of a professional peer, so be sure to credit the author of the paper as appropriate. If you have written a paper or article for this project, be sure to credit it as your own. You might think of it as a presentation you have been assigned to give for your research team.

Of course if you wish, you're welcome to write an actual technical paper and present it. You should write it with the goal of publication by an association to which you belong. But before beginning, be sure to contact your association for its particular format and guidelines. These vary considerably from one organization to the next.

PREPARING YOUR TECHNICAL PRESENTATION

Your topic will depend on who you are and what work you do. It should be something in which you have first-hand knowledge and experience. Typically, a technical paper or article describes how a problem is solved, a new procedure developed, or new data obtained. It may be strictly informative in nature, or it may include recommendations based on findings. It should present original information that interests professionals in the field, contributes to their technical knowledge, and perhaps applies to their own work.

YOUR VERBAL PRESENTATION

Once you've selected or completed your technical paper or article, it's time to prepare your verbal presentation. At a technical conference your audience will consist of intelligent professionals who are eager to gain new information. As such, they are highly receptive to a presentation that is interesting, well-organized, and informative. However, they will not forgive a speaker who insults them by failing to be organized, by using poor-quality visual aids, or by committing the cardinal sin of technical presenters – reading the paper aloud.

What an audience at a technical conference wants is a speaker who talks in a direct, conversational style, including only the highlights. They appreciate a clear statement of the problem being discussed, a brief explanation of how it was solved, and a review of the paper's conclusions, their applications, and the speaker's recommendations.

In converting your technical paper or article to a speech, you should begin by carefully reviewing it and reducing the number of main points to a manageable amount – no more than four or five. Select a few tables, graphs, or other illustrations that clarify each point; these will become visual aids.

Organize your speech carefully, using a simple outline. In the introduction, you may briefly state the scope of the project or study. You can discuss methods of design, research, or analysis, but don't include too many details. It is valuable to know your audience so that you can plan

> Select only essential material, and humanize the statistics with anecdotes and history.

how they might react to various possible introductions in your talk. If, for example, you suspect your audience will be biased against your results, you may wish to begin, instead, with some historical or anecdotal information related to the problem your research solves.

The body of your speech should simply highlight the body of the technical paper or article. Finish by summarizing, discussing applications and benefits of the findings, or by listing recommendations. The advice to "Tell them what you're going to tell them, tell them, and tell them what you've told them" is sometimes applicable to the verbal presentation of a technical paper.

Remember, though, that your speaking brings with it another component to the equation – the human dimension. So, simply restating the paper will not do justice to the information you wish to impart and the impact you wish to create. Find ways to humanize the data and make larger chunks of information digestible in one sitting. To accomplish this, break down the material, select only essential points, and humanize the statistics with anecdotes and history. Describe any real world impact of the research, making it especially relatable to your audience.
When preparing your speech, remember to keep it…

▸ **Clear.** Avoid complicated sentences and cryptic words. There is no relationship between the quality of ideas and the complexity in which you present them. Make illustrations simple.

▸ **Logical.** Your ideas should flow logically and sequentially. Don't omit any necessary details that would help readers follow and understand your message. But don't burden them withirrelevant data, either.

▸ **Objective.** Avoid editorializing – your listeners are knowledgeable professional who want pertinent information as well as a broad understanding of the main themes of your work. Strive for balance; include any limitations or disadvantages associated with methods and recommendations.

YOUR VISUAL AIDS

Visual aids aren't just desirable at a technical conference – they're expected. However, the professionals who attend these meetings are often subjected to visuals they can't see or decipher. By using appropriate, good-quality visuals, you have an opportunity to make an especially positive impression.

There are three basic kinds of slide information:

1. **Words:** phrases, sentences, bulleted lists
2. **Pictures:** photos, drawings, clipart, maps, graphs, and diagrams
3. **Math:** formulas, statistics, and other uses of numbers

All three may be combined in one slide. Try to strike a balance where information is provided elegantly yet clearly. Clipart or photos can help enliven a statistical slide, but don't clutter the field with too many images. Instead, use them to help reinforce the main idea. If you're comparing dairies, the audience will understand smaller and larger milk bottles better than they would a slide packed with various pictures of dairies.

If you're giving a technical talk for scientists or engineers, you will probably need to use graphs, tables, charts, photographs, maps, diagrams, and perhaps drawings. Any of these can help to make your points clearer and with PowerPoint, you can use them to create effective visuals. You will find more tips and suggestions for using visuals aids effectively – especially Microsoft PowerPoint – in the back of this manual.

YOUR ASSIGNMENT

For this speech, prepare or select a technical paper drawn from your professional field, then verbally present its highlights in a 10- to 12-minute speech. In most cases, the members of a Toastmasters club have far different knowledge levels than the members of your technical association. As a result, you should carefully tailor your presentation to their interests and needs. Use Microsoft PowerPoint, a data projector and possibly a flipchart to illustrate your presentation, making visuals bold, simple, and colorful. Strive to make your speech interesting, using vocal variety, body language, and the other delivery skills you have learned.

EVALUATION GUIDE FOR **PRESENTING A TECHNICAL PAPER**

Title _____

Evaluator _____ Date _____

Note to the Evaluator: For this project, the speaker was asked to present a technical paper or article. This talk should be presented as though the speaker were the author or a member of the research team. The opening should contain a clear description of the problem or process being discussed. It should also humanize the data, through use of an anecdote or some historical information regarding the research. The body should highlight only a few major points from the paper, possibly describing any real world impact of the accumulated data. The conclusion should contain a short summary of the paper's conclusions, recommendations, and perhaps draw the listener back to the anecdote of the original problem discussed in the opening. The speaker shoulduse a conversational speaking style and has been asked to illustrate his/her message using a PowerPoint slideshow and possibly a flipchart. It is suggested you read this entire project before hearing the speech.

In addition to your verbal evaluation, please write answers to the questions below. Where appropriate, offer specific suggestions for improvement.

▶ Did the speaker discuss only the highlights of the technical paper or article during the verbal presentation?

▶ Was the presentation tailored for the audience's interests and knowledge levels?

▶ How did the speaker make the presentation interesting?

▶ What evidence indicated that the speaker prepared diligently for this project?

▶ How effective were the speaker's visual aids and the way they were used?

▶ What presentation strengths does this speaker have, as displayed during this speech?

▶ In your opinion, how could the speaker improve his or her delivery in subsequent speeches?

EXECUTIVE SUMMARY:

Add the computer and Internet to your teaching toolkit by supplementing your talk with electronic communications before and after the meeting. Make maximum use of high-tech teaching so your audience can achieve maximum learning. Use e-mail, blogging, vlogging, websites, and other high-tech marvels to bring your presentation into the 21st century.

OBJECTIVES:

▸ Understand the nature and process of a technical presentation supported with professional-level visual aids.*

▸ Arrange pre-meeting communications via e-mail.

▸ Find or create a post-meeting website for further dissemination of information supporting or enhancing your verbal presentation. You may create a Web page and add it to your club's website, making use of podcasting, webcasting, or a basic Internet template.

▸ Use a desktop computer, Microsoft Word, a Web browser, a simple graphics program for photos and other images, Microsoft PowerPoint, as well as a flipchart .

Time: 12 to 15 minutes – longer if club program allows

Arrangements for this presentation should be made with your club's vice president education well in advance, taking into consideration the requirements for high-tech visual aids. Also, you should arrange to have printouts of your pre- and post-communications for your evaluator to see at the lecture. Time mentioned does not include these other forms of sharing information.

ENHANCING A TECHNICAL TALK WITH THE INTERNET

We live in the age of the information superhighway, where almost everyone has an address along the route. Personal, corporate, government, nonprofit, and informational websites dot our highway providing instant access to communication and information.

Never before have the methods of delivering technical information so rivaled their subject matter for sheer hi-tech wizardry. Yet, as wondrous as these technologies may seem, they are becoming more commonplace, worldwide, every day. It is time that presenters of technical talks make full use of these tools to ensure that the information they are conveying is better retained. Our new technologies offer us the ability to supplement or reinforce technical talks with messages sent before and after presentations. In fact, the nature of a presentation may now be expanded to include visits to a designated website where a topic of discussion at the meeting is later followed up with video footage, posted discussions, or other supplemental materials. More instructors are doing this every day.

Today, many computer programs are intuitive or come with easy-to-follow instructions. If that's not enough, the bookstores are overflowing with simple books explaining e-mail, PowerPoint, Web design and more. And audiences, today, are skilled high-tech learners. websites, e-mail, PowerPoint, and blogs are all part of today's educational and communications systems, with more tools arriving daily.

> ► **Using technology to enhance and supplement a presentation helps an audience to better retain the speaker's messge.**

Consequently, there is no excuse for today's experts – in any field – to avoid adding the computer and the Internet to their teaching toolkit. The best instructors make maximum use of high-tech teaching so that their audiences can achieve maximum learning. With the following project, here is your opportunity to do the same.

A TECH TALK ASSIGNMENT EXPANDED BY THE INTERNET

In this challenging project, you will coordinate the expansion of your technical talk to include prior- and post-lecture communications. These include:

▸ Developing a central theme for your lecture, then adding introductory ideas to prepare your audience and follow-up concepts to support and supplement the talk.

▸ Researching the Internet to find websites that provide this material.

▸ Collecting e-mail communication to your fellow club members asking them to read some material before your speech; this may be an attached document or an

address of a website with text, video, or another form of communication. You may also start a blog or vlog and initiate an online discussion of the material.

▸ Delivering a technical lecture covering the central theme you planned; at some point, directing your listeners to visit at least one more website you have found; dictate the site's Web address or promise to e-mail it to the attendees.

▸ Contacting your audience members via e-mail after the lecture, providing the Web addresses discusses in your tech talk, and asking if they have any further questions. Answer these questions via e-mail or messages posted on your blog.

YOUR ASSIGNMENT

Preparation for a technical talk has always included finding or creating additional materials for your audience to absorb beyond the meat of the lecture itself. A speaker might recommend a book or journal article to supplement material presented in the actual lecture. Today's speaker continues this practice, but you have the advantage of new tools that are widely available. In particular, the Internet can simplify how you offer supplemental information: via e-mail, websites, and other high-tech means of communication. Now you can provide a venue for virtual discussions before and after the actual presentation. Each of these methods asks your audience members to do something – they must now actively navigate through the material and respond publicly. Interactivity is an important key to today's supplemental materials. Be prepared for this increased activity by mapping out exactly what it is you will be focusing on before, during, and after your speech.

> **Interactivity is important to supplemental materials. Map exactly what it is you will be focusing on before, during, and after your speech.**

PREPARING THE PRE-TALK MATERIALS

How do you help your audience learn from you before they hear your presentation? Three days before any lecture, one college professor routinely sends his audience an e-mail with two instructions in it. The first includes a link to a website that offers information they must read in preparation for his talk. The second is a link to a blog – a Web log – where they are required to post discussion messages. The participants spend the next few days posting questions and answers about what they've read on the website. By the day of the lecture, they are primed and ready to pay full attention.

To accomplish the first part, use a search engine like "Google" and search for an appropriate website. In the real world, a speaker who cannot find a suitable website may opt to create one. Creating a website can be fairly straightforward, and the result will be more within the speaker's control. It's also a great marketing device at a professional conference. However, for the purposes of this exercise you'll probably find at least one already existing site, and you can send your audience a link via e-mail. Accompany the website link with a note asking your attendees to view particular pages, as well as photos and videos.

For the second part, it's not difficult to create a blog and require participants to post messages, reports, or reactions to your assignments. To start, simply type, "start a blog" into the Google search box. The results will offer you a variety of popular choices. The free or low-cost blog sites are well worth exploring. Some lecturers build a vlog, which is a blog that includes video. Depending on the needs and capabilities of your audience, video can be a useful tool to offer via the Internet. E-mail its link and remind the audience to attend your live presentation, too.

PREPARING YOUR TECHNICAL PRESENTATION

It is important to recognize the crucial differences between a written paper and a speech. For instance, the usual technical paper is structured in three parts: *Tell them what you're going to say, say it, and then tell them what you said.* Be cautious using this structure with verbal presentations. A biased audience may not appreciate or benefit from a summary at the beginning. So, you may prefer to attract the audience's interest with a related anecdote.

Consider two speakers. One begins by quoting basic statistics on tuberculosis. The other begins with, "A hundred years ago, a diagnosis of TB was practically a death sentence, and we're still fighting to save lives." Which speaker would you rather hear? The second example offers something that technical documents lack – a human perspective on the data. Opening with a mystery, a history, or even a short anecdote will help your technical talk stand apart from the supplemental written materials. Choose your structure to fit your audience, your material, and your speaking style.

A paper lacks life. Because a reader can relax and revisit written material at leisure, it's often less stimulating than a speech. Use the difference to your advantage. Plan which details you want to reinforce with reading and which highlights you want to present in person.

Don't ignore the visual aspect of your verbal presentation. Be sure to read the section of this manual on visual aids to learn more about creating effective PowerPoint slides. Since this project is dedicated to increasing your technical skills in relation to technical talks, try to use PowerPoint in your presentation. Remember, though, you don't have to lecture on a high-tech topic in order to benefit from PowerPoint. A chef can use contemporary techniques to teach quaint cooking skills. She can run a PowerPoint show that explains a recipe to her apprentices and then follow up by demonstrating its preparation in front of them.

Soon, your audience will be speeding down that information superhighway toward some other goal. While they're parked in your driveway, make sure you capture their attention and offer them the best technical tools you can. Direct them to a website to visit later so that they might review or expand their comprehension beyond the scope of the in-person technical talk. Here's a good rule of thumb in giving out website addresses verbally:

If the address is simple, you can present a written version of it or spell it out as dictation, and allow them to write it down. Try to introduce this information smoothly so that it enhances – rather than detracts from – your tech talk.

AFTER THE TALK

You may need to wait until after your talk to give your audience a website address. If the address involves non-letter characters or difficult spelling, send it to them via e-mail or post it as a live link on your blog. Computers are very literal, and one misplaced letter or dash can block your attendees from viewing the intended website. So, in your talk, mention that you will send them the address soon, and then send it as soon as possible.

Remember the chef with PowerPoint slides? She can e-mail the entire show to her trainees so that they'll have a reference guide for recreating the dish. Additionally, she can host a blog where her attendees compare their own cooking results and post their own variations of the original recipe.

There are other ways to reinforce your tech talk. Allow your audience to continue blogging (posting messages in a Web log) about the lecture material. Or, simply answer more of their questions via e-mail. With the Internet handy, there is no shortage of ways to help your audience gain the most from your technical talk.

EVALUATION GUIDE FOR **ENHANCING A TECHNICAL TALK WITH THE INTERNET**

Title _____

Evaluator _____ Date _____

Note to the Evaluator: In this project, the speaker expands on his presentation using modern resources to communicate before and after the actual speech. Prior to the talk, the speaker should contact all planned attendees with an e-mail that includes some pertinent information such as an agenda for the speech. During the speech, the speaker should follow the agenda sent out previously or else explain any deviations from the original plan. The speaker should also refer the attendees to websites which will offer further information and explanation of the topic. The speaker may follow up with the audience after the talk via e-mail or a group blog. All forms of communication should be smoothly planned and executed. It is suggested you read the entire project, including samples of the pre- and (planned) post-communications, before the presentation.

In addition to your verbal evaluation, please complete this evaluation form by assigning a rating in each category, then making comments in the space on the right. Don't comment on each category – only those where special praise or specific recommendations for improvement are appropriate.

COMMENTS/RECOMMENDATIONS

▶ Were extra materials on hand for those who needed them?
EXCELLENT   SATISFACTORY   SHOULD IMPROVE

▶ Did the speaker clearly and logically support his/her main message?
EXCELLENT   SATISFACTORY   SHOULD IMPROVE

▶ Did the presentation's subject matter appear to be well-coordinated with the pre- and post- communications?
EXCELLENT   SATISFACTORY   SHOULD IMPROVE

▶ Did the electronic communications include enough pertinent material? What could have been added?
EXCELLENT   SATISFACTORY   SHOULD IMPROVE

▶ Did the electronic communications avoid unnecessary overlap? What could have been deleted?
EXCELLENT   SATISFACTORY   SHOULD IMPROVE

▶ Did the speaker effectively deliver the in-person portion of the presentation?
EXCELLENT   SATISFACTORY   SHOULD IMPROVE

▶ Did the speaker discuss the pre- or post-talk communications in a smooth and prepared manner?
EXCELLENT   SATISFACTORY   SHOULD IMPROVE

▶ Were the visual aids well-designed and well-presented to coordinate with the pre- and post- communications?
EXCELLENT   SATISFACTORY   SHOULD IMPROVE

▶ Please rate the overall effectiveness of the presentation.
EXCELLENT   SATISFACTORY   SHOULD IMPROVE

PROJECT	SPEECH TITLE	DATE	VICE PRESIDENT EDUCATION'S INITIALS
1. The Technical Briefing			
2. The Proposal			
3. The Nontechnical Audience			
4. Presenting a Technical Paper			
5. Enhancing a Technical Talk with the Internet			

Save this page to verify your completion of the projects in this manual. Submit the Project Completion Record form from the appropriate manuals when applying for the Advanced Communicator Bronze, Advanced Communicator Silver, or Advanced Communicator Gold awards.