

# “AUDIENCE ANALYSIS”

## Technical Report Writing

### Department of Electrical Engineering

# AUDIENCE RECOGNITION

- In the business world you will never speak in vacuum.  
Consider the following questions:
  - Who is your audience?
  - What does this reader or listener know?
  - What does this reader or listener not know?
  - What must you write or say to ensure that your audience understands your purpose?
  - How must you communicate to more than one person(multiple audience)?
  - What is the person's position in relation to your job title?
  - What is the person's attitude toward your topic?
  - What diversity issues you must consider?



- If you do not know the answer to the previous questions then your document may:
  - Contain jargon or acronyms your reader will not understand
  - Have tone that may be inappropriate for management(too dictatorial) or for the subordinates(too relaxed)
  - Not consider your audience's level of understanding
  - Not factor in your audience's unique personality and traits, which could impact how successfully you communicate



## KNOWLEDGE OF SUBJECT MATTER

- What does your audience know about the subject matter?
- Does the person work closely with you on the topic?(High-tech peers)
- Does the audience have general knowledge of the subject matter but a different area of expertise?(Low-tech peers)
- Is the audience totally uninvolved in the subject matter?(Lay audience)
- Could your audience be a combination of the above?(Multiple audience)



**TABLE 4.1** Audience Variables

Knowledge of Subject Matter

- High tech
- Low tech
- Lay
- Multiple

Personality Traits

- Audience's perceived personality
- Audience's attitude or position regarding the topic
- Audience's preference regarding style
- Audience's response to the topic

Issues of Diversity

- Age
- Gender
- Race and/or religion
- Language and/or culture of origin—multicultural or cross-cultural

## 1-HIGH TECH AUDIENCE

- Working in your field
- Might work directly with you in your department
- Might work in a similar capacity for another department
- Wherever they work, they are your colleagues because they share your educational background, work experience, or level of understanding.
- If you are a computer programmer, for example, another computer programmer working on the same system is your high-tech peer.



# CHARACTERISTICS OF HIGH-TECH AUDIENCE

- Experts in the field you are writing about.
  - If you write an email to a department colleague about a project you two are working on, your associate is a high-tech peer.
- They share your level of understanding because their experience and qualification is comparable to yours:
  - They will understand high-tech jargon, acronyms, and abbreviations. You do not need to explain MHz to an electronic technician.



- They require minimal details regarding standard procedures or scientific, mathematical, or technical theories:
  - Two biomedical technologists, when discussing pH, do not need to explain what pH is.
- They need little background information regarding a project's history or objectives unless the specific subject matter of the correspondence is new to them:
  - For example, if you are writing a status report to your supervisor, who has been involved in the project since its conception, you will not need to mention the history of that project unless the supervisor is new.



**FIGURE 4.1** E-mail Message to High-Tech Audience

This e-mail, written to high-tech readers, uses terminology without explanation or definition. Its tone is businesslike and directive.

Date: June 15, 2012

To: HVAC Personnel

From: Fatai Sayanti, Facilities Manager

Subject: Security of HVAC

Due to increased concerns about the possibility of terrorist threats, our company is installing an interconnected wireless HVAC system and wireless security system. These two systems will be interconnected through a common wireless technology, using the same frequency modulation and protocols.

### Wireless Technology

The HVAC system uses wireless control systems, including RF, IR, and protocols such as 802.1 Ix, Bluetooth, and IRDA<sub>5</sub>. We will install one wireless thermostat with a transceiver for controlling the HVAC system.

### Improved HVAC Capabilities

This new security system will include the following:

- Wireless CO sensors and wireless smoke or fire detectors
- Wireless control keypads for communicating with and controlling the security system
- IR sensors to detect the presence of employees in rooms
- Room controls to regulate the temperature of unoccupied rooms
- GUIs to provide programmable thermostats
- An air quality sensor configured to monitor toxicity levels and presence of foreign substances

Next week, you will receive training for installation and monitoring of this new security system.

# LOW-TECH AUDIENCE

- Your coworkers in other departments
- Might include your bosses, subordinates, or colleagues who work for other companies.
- For example, if you are a biomedical equipment technician, the accountant or personnel director or graphic designer in your company are your low tech-peers. They have worked around your company's equipment and, therefore, are familiar with your technology. However, they do not understand the intricacies of this technology.
- Your boss is often low-tech because he no longer works closely with the equipment. Although they were technicians at one time, as they moved into management, they moved further and further away from technology.



- Your subordinate might be low-tech because their level of experience and education is less than yours.
- Although your colleagues at other companies might have your level of education and work experience, they could be low-tech if they are not familiar with your company's procedures or in-house jargon, acronyms, and abbreviation.



# CHARACTERISTICS OF LOW-TECH AUDIENCE

- Familiar with the technology but their job responsibilities are peripheral to the subject matter.
- Since they are familiar with your subject matter, they understand some abbreviations, jargon, and technical concepts. To make sure they understand your content, define the abbreviation parenthetically: BCA (burst cutting area).
- You need to provide some background information.



**FIGURE 4.2** E-mail Message to Low-Tech Audience

Date: June 15, 2012

To: Security Personnel

From: Fatai Sayanti, Facilities Manager

Subject: Security of Heating, Ventilating, and Air Conditioning (HVAC)

When you are patrolling the facilities and grounds, be on the alert for suspicious substances, such as fine powders, residues, fog, mist, oily liquids, or unusual odors. Not every liquid or odor is necessarily suspicious. Just focus on those with unexplainable origins. Also watch for discomfort in our employees, such as two or more people experiencing difficulty breathing. These signs could be evidence of dangerous chemicals in our HVAC system.

If you discover problems, follow these procedures:

- DO NOT touch the substance.
- Evacuate all employees from the affected area.
- Contact our HVAC personnel and ask them to shut down all systems to avoid spreading contamination.
- Secure the area.
- Report the situation to management, including the location, number of affected employees, and a description of the substance.

As first responders, your alertness and professionalism are essential to ensure the safety of our 5,000 employees.

This e-mail to low-tech readers deals with a very important subject (security in the face of potential terrorism). The writer presents only what the audience needs to know in order to complete their job responsibilities. The writer conveys this content simply, using short sentences, a list, and easy-to-understand words. HVAC is defined.

### 3. LAY AUDIENCE

- They don't work with you or for your company
- Have no knowledge about your field
- If you work in network communications for a cable company, for example, and you write an email to a client regarding problem with the high-speed internet connection, your audience is lay reader.



# HOW TO WRITE SUCCESSFULLY TO LAY AUDIENCE

- Write in a simple and easy to understand manner as they do not have knowledge of the subject matter. Explain the topic to them through precise word usage, depth of detail, and simple graphics.
- Avoid high-tech terms or define them thoroughly as they do not understand your jargons, abbreviation, or acronyms.
- Include background information



For example, look at the maintenance procedure, which is part of a user manual provided for the purchaser of an audio recorder (Figure 4.3).

Next, look at the procedure for cable preparation from an installation manual directed toward high-tech readers (Figure 4.4).

**FIGURE 4.3** Instructions for a Lay Reader

## MAINTENANCE

### Cleaning the Head Section

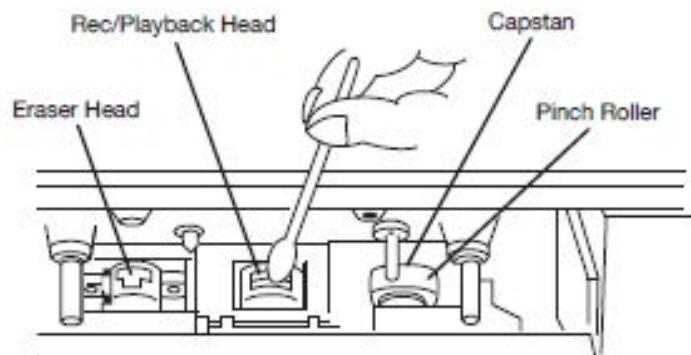
The heads, capstan, and pinch rollers get dirty easily. If this head section becomes dirty, the high-frequency sound will not be reproduced and the stereo balance will be impaired. This hurts your system's sound quality.

To avoid these problems, clean your system's head section regularly by following these simple steps:

1. Push the STOP/EJECT button to open the cassette door.
2. Dip a cleansing swab into the cleaning fluid.
3. Wipe the heads, capstan, and pinch rollers with the swab.
4. Allow 30 seconds to dry.

#### Note:

- Do not hold screwdrivers, metal objects, or magnets close to the heads.
- When demagnetizing the heads, be sure the unit's POWER switch is in the OFF position.



The introductory paragraph clarifies for the lay reader why he or she should clean the head section, instead of incorrectly assuming that the reader will understand without being told. This procedure also uses a simple graphic to clearly depict what action is required.

**FIGURE 4.4** Instructions for a High-Tech Audience

1. Place nut and gasket over cable and cut jacket to dimension shown.
2. Comb out braid and fold out. Cut cable dielectric to dimension shown. Tin center conductor.
3. Pull braid wires forward and taper toward center conductor. Place clamp over braid and push back against cable jacket.
4. Fold back braid wires as shown, trim to proper length (D), and form over clamp as shown. Solder contact to center conductor.
5. Insert cable and parts into connector body. Make sure sharp edge of clamp seats properly in gasket. Tighten nut.

This example provides no background about why to perform the action, no clarity about how to perform the steps, and no graphics to help the reader visualize the procedure. This procedure is written for a high-tech audience.

A lay reader would have no idea what is going on in Figure 4.4. Why are we performing this act? What's the purpose? What will be achieved? Perhaps these questions are irrelevant for the technician, who knows the background or rationale, but a lay audience will be confused without an introductory overview. In addition, a lay audience will not know the terms *gasket*, *cable dielectric*, or *center conductor*. These terms are high tech. What dimensions are we supposed to achieve? The high-tech reader, who is familiar with this operation, knows what is meant by proper length but not a lay audience. Finally, when is a clamp seated “properly in gasket”? Again, a lay audience needs these points clarified.

Composing effective technical communication requires that you recognize the differences among high-tech, low-tech, and lay audiences. If you incorrectly assume that all readers are experts in your field, you will create problems for yourself as well as for your readers. If you write using high-tech terms to low-tech or lay audiences, your readers will be confused and anxious. You will waste time on the phone or answering e-mail messages clarifying the points that you did not make clear in the technical document.



**TABLE 4.2** How to Communicate to Different Audience Levels

Audience Level	How to Communicate	Sample
High Tech	Use jargon, acronym, or abbreviation alone.	The wastewater is being treated for DBPs.
Low Tech	Use jargon, acronym, or abbreviation with a parenthetical definition.	The wastewater is being treated for DBPs (disinfection by-products).
Lay	Use jargon, acronym, or abbreviation with a parenthetical definition and a brief explanation or extended definition.	The wastewater is being treated for DBPs (disinfection by-products), such as acid, methane, chlorine, and ammonia.

Table 4.2 shows techniques for communicating with audiences who have different levels of technical knowledge. These various techniques for defining terms are neither foolproof nor mandatory. You are always the final judge of how much information to provide your readers. However, if your readers fail to understand your content, then you have failed to communicate.

## MULTIPLE AUDIENCE

- Audience from different level of expertise
- For example, when writing a report, most people will assume that their supervisor will be the only reader. The report might be sent to others also.
- It is a challenge to cater the needs of multiple audience



# CHARACTERISTICS OF MULTIPLE AUDIENCE

- Your intended audience may not necessarily be the only audience.
- Some of the multiple readers will be unfamiliar with the subject matter. Proper background data (objectives, overviews) will clarify the history of the report for these readers. In a letter, report, e-mail messages, Web site, or blog, this background information cannot be too elaborate. In this case, you can provide a reference line, subject line, or link suggesting where the readers can find out more about the subject matter if they wish—“Reference: Operations Procedure 321 dated 9/12/12.”



- In longer reports, background data will appear in the summary or abstract, as well as in the report's introduction.
- Multiple audience have diverse understandings of your technology. This requires that you define jargon, abbreviation, and acronym.



# DEFINING TERMS FOR AUDIENCE

- The terms for audience can be defined:
  - Parenthetically
  - In a sentence
  - In an extended paragraph
  - In a glossary
  - As online help with a pop-up definition



## DEFINING TERMS PARENTHETICALLY

- Rather than just writing CIA, write CIA (cash in advance) or cash in advance (CIA).
- These parenthetical definitions are to be used once per correspondence. They do not take a lot of time or offend the readers. If the document includes many jargons, abbreviations, and acronyms, then parenthetical definitions might be difficult to manage. In this case, supply a separate glossary.



# DEFINING TERMS IN A SENTENCE

**Defining Your Terms in a Sentence.** If you provide a sentence definition, include the following: *Term + Type + Distinguishing characteristics*. For example, using a sentence to define *HTTP*, you would write the following:

Hypertext Transfer Protocol is a set of rules for the secure transfer of files, including text, graphics, videos, and sound on the Internet.

The diagram illustrates the structure of a sentence definition. It features a rectangular box containing the sentence "Hypertext Transfer Protocol is a set of rules for the secure transfer of files, including text, graphics, videos, and sound on the Internet." Three red arrows point from the words "Protocol", "rules", and "files" respectively, to the words "Term", "Type", and "Distinguishing characteristics" located above the sentence. The word "Protocol" is underlined, indicating it is the term being defined.



# DEFINING TERMS IN AN EXTENDED PARAGRAPH

## EXAMPLE ►

A video card (graphics accelerator card, display adapter, or graphics card) is a type of printed circuit board that can be inserted into an expansion slot of a computer's motherboard. The video card creates and outputs images to a display. Functions of a video card can include video capture, MPEG-2 and MPEG-4 decoding, TV output, or the ability to connect multiple monitors.



# DEFINING TERMS USING A GLOSSARY

**Using a Glossary.** If you have not defined your terms parenthetically, in a sentence, or in a paragraph, you should use a glossary. A glossary is an alphabetized list of terms placed after your conclusion/recommendation.

## GLOSSARY

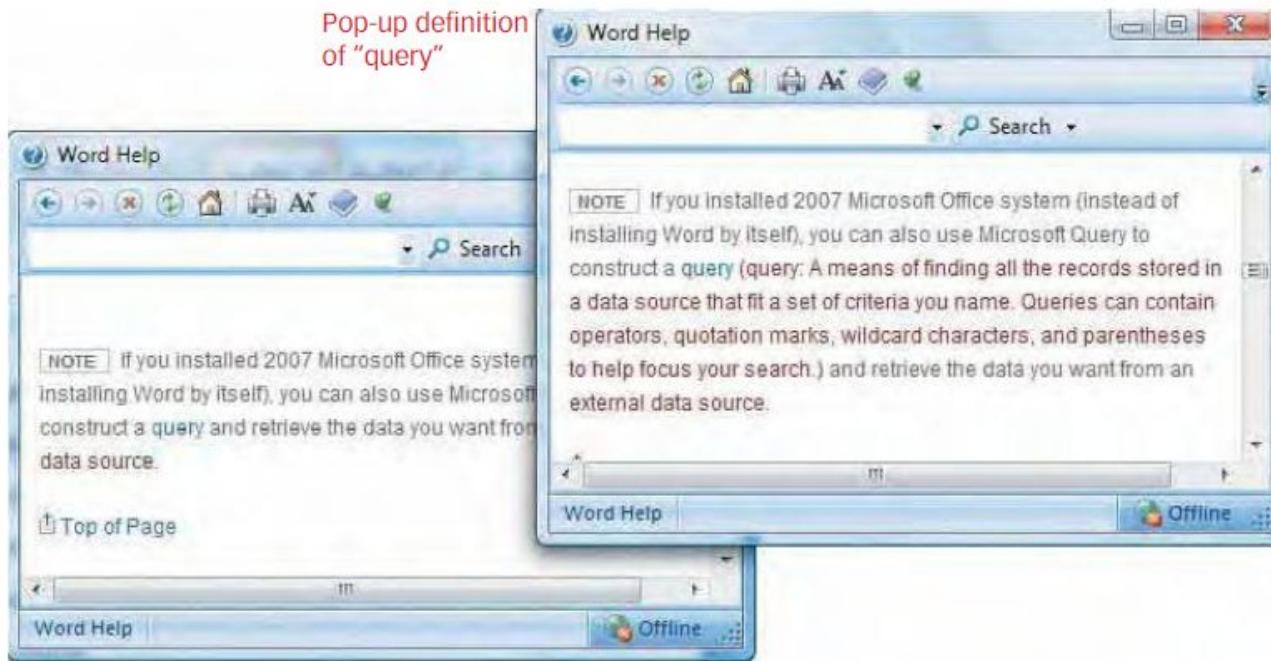
ADC	analog to digital converter
Analog	a variable signal continuous in both time and amplitude
DAC	digital to analog converter
LAN	local area network
PSTN	Public Switched Telephone Network—analog phone systems
ROI	return on investment
Voice signal	allows users to access phone options with a single voice command
VoIP	voice over Internet protocol
WAN	wide area network



# DEFINING TERMS THROUGH ONLINE HELP OR WITH A POP-UP DEFINITION

**FIGURE 4.6** Online Help Screen with Pop-up Definition

Online help screen with hypertext link to definition



# ISSUES OF DIVERSITY IN COMMUNICATION

- Gender
- Race
- Ethnicity
- Religion
- Age
- Class
- Physical and mental characteristics
- Language



# WHY YOU SHOULD BE CONCERNED ABOUT DIVERSE AUDIENCE

- Prejudicial behavior and discrimination on the job will not be tolerated.
- Respecting diversity is the right thing to do. People should be treated equally regardless of their age, gender, culture, or religion.
- Diversity is good for business.
  - A workplace where employees feel valued and respected results in more motivation and commitment to the company.
  - Clients and customers prefer shopping in an environment devoid of prejudice.



- A diverse workplace keeps companies competitive. Talent does not come in one color, nationality, or belief system. Instead, talent is represented by people from a vast array of background and life experiences. Competitive companies cannot allow discriminatory preferences and practices to impede them from attracting the best talent. Diversity management is such an important concern that American businesses spend millions of dollars training employees to understand multiculturalism and diversity.



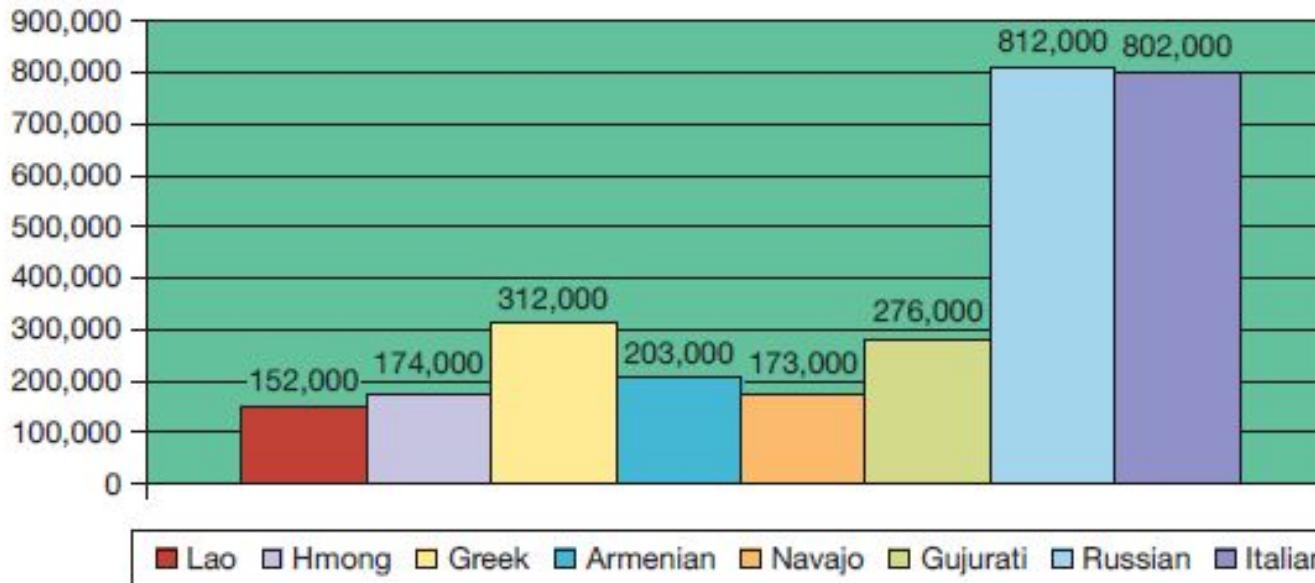
# MULTICULTURALISM AND TECHNICAL COMMUNICATION IN A GLOBAL ECONOMY

Q: Why is "multiculturalism" important in technical communication? Doesn't everyone in the United States speak English?

A: No, not everyone in the United States speaks English. Look at these facts:

- 53 million Americans or 20 percent of the population speak a language other than English at home.
- 32 million Americans speak Spanish in the home.
- 2.3 million Americans speak Chinese in the home.
- 1.4 million Americans speak French in the home (Progressive Policy Institute). See figure 4.7 for a comparison of languages other than English spoken at home.

**FIGURE 4.7** Languages Other than English Spoken at Home



Q: OK, but, shouldn't we write for the majority of our audience?

A: Your audience will be diverse—and the “majority” in the United States is changing.

- “America’s population has become increasingly diverse as Hispanics, African Americans, Asians and people from many other segments rapidly contribute to the cultural richness of our population.”
- Hispanics are expected to number 51.4 million by 2011.
- Asians, African Americans, and Hispanics accounted for more than 70 percent of population growth, and Hispanics accounted for more than 50 percent since 2000.
- By 2011 the population in the three largest ethnic groups will be more than 107 million and Hispanics will represent nearly half of that population.
- America has 113.5 million households. Of this total, nearly 13 million are Hispanic, nearly 11.5 million African American, and nearly 4 million Asian. (Melgoza)

## TO DO:

Q1: Write a detailed note on any three challenges faced in multicultural communication. (10)

Q2: Make a Presentation of any of the following

1. Multi Culture
2. Cross Culture
3. Intra Culture

Q3. Use each of the following terminologies in a few sentences where your audience is a layman:

1. Ambient Sensor
2. Rail-to-Rail Input
3. Capacitive Voltage Regulator

