# Alternatives to Speech and Real-Time Communication

Prepared for Autreat 2005
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# What We Will Talk About

- Why would you want to use something other then real-time speech?
- What options are there for common situations requiring real-time speech?
- How do you handle prejudice and ignorance?

# MOST IMPORTANT POINT

It is okay to not communicate "normally"

# PART I

## WHY WOULD YOU WANT AN ALTERATIVE TO REAL-TIME SPEECH?

# What is “Real-Time Speech”?

- “Real-Time” – requiring composing and expressing a thought quickly in response to some external action
- “Speech” – using your biological voice
- Real-Time Speech is anything that combines the real-time aspect defined above with a biological voice
- This presentation will focus on communication techniques other then real-time speech. These include methods that are real-time but not speech, methods that are speech but not real-time, and methods that are neither speech or real-time

# Why Real-Time Speech is Difficult

- It requires a good working memory to remember parts of sentences/paragraphs that you have already spoken, as they are gone once voiced
- It requires an understanding of common English (in most of the countries represented here) language syntax, grammar, and vocabulary
- It requires ability to quickly formulate thoughts and responses

# Other Reasons Not to Talk

- Physically painful
- Interrupts your own thoughts when you hear your own voice
- Any other physical or neurological problem that makes it hard to talk
- Can’t concentrate on reaction to words while concentrating on speaking
- Hard to ask for help or express emotional content

# Why I don’t always use real-time speech

- Talking hurts my throat
- It depletes my energy reserves quickly
- When somewhat overloaded, I cannot access speech at all
- It is often not possible for me to use speech to ask for help or tell an authority figure they are wrong
- I cannot use real-time speech to talk about my own strong emotions
- But I can talk – so people don’t realize I’m leaving a lot of things unspoken

# Using Other Forms of Communication, I can…

- Tell a friend, “Thank you for your friendship. It means a lot to me.”
- Tell a dentist, “The tooth you worked on last week is rubbing against the tooth above it, and is starting to give me a headache”
- Ask a shopkeeper, “What are the advantages of this product over the cheaper version?”
- On the phone with computer support, “Hey, I bought the extended warrantee to avoid *exactly* this kind of problem. You are under a contractual obligation to fix this machine!”

# PART II

## COMMUNICATION OPTIONS

# You don’t have to give up real-time speech!

- If you find real-time speech is helpful to you, continue to speak during those times it is useful!
- It’s not “faking” to communicate typically sometimes and atypically other times
- It’s okay to combine typical and atypical communication techniques

# Two Types of Communication

- Non-linguistic: Picture or symbol based

  Examples
  - PECS
  - Symbol boards (where symbols express an entire thought)
  - Gestures
- Linguistic: Language based

  Examples:
  - Sign language
  - Writing
  - Speech
  - Some complex symbolic systems

# Which Type of Communication?

- BOTH!
- Linguistic communication provides the highest degree of self-direction in our society
- Non-linguistic communication can often be used to supplement language and engage in simple exchanges (why type “Yes, I want that” when a nod will do?)
- However…some individuals have difficulty learning or using linguistic communication.  Non-linguistic communication can allow them to take an active role in their own life and should be respected as a valid form of communication.

# Non-Linguistic Communication

- Can be used by people unable to access any form of language (whether temporarily unable or permanently unable)
- Some systems can be used with partners who don't share a common language with the speaker (for instance, grunting and smiling have fairly universal meanings)
- Vocabulary quickly becomes too large to be feasible
- Communication partners often have to guess as to possible subjects of conversation
- Communication topics may be limited by vocabulary

# Gestures

- Commonly understood meaning within a culture
- Not sign language!
- Used by most people to add “depth” to communication
- Can be used by themselves, especially in quick encounters with predefined interaction scripts (store counters, airline agents, walking past a friend)
- Sometimes need to be exaggerated when used as stand-alone methods of communication

# Vocalizations

- Sounds other then normal linguistic speech
- Can be used in place of “yes” and “no”
- Can convey excitement, sadness, anger, and other emotions
- Almost all autistic people do this already, even young children and people with no language ability!

# Object Exchange

- An object (or representation of the object) is handed to a communication partner
- Often used to teach the concept that one thing can *represent* another thing, which is a fundamental abstract concept of language
- An empty cup handed to a caregiver might indicate that you are thirsty; a bus pass might indicate that you want to go out

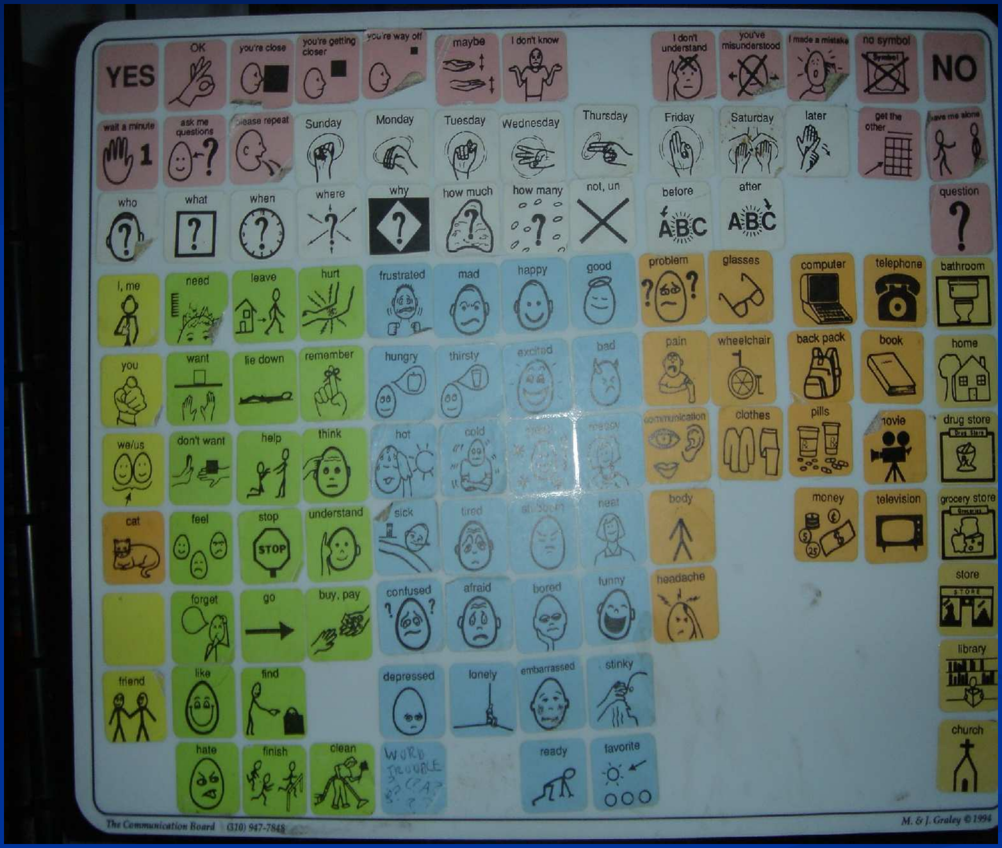
# Music Communication

- Good for communicating emotions
- Requires communication partner to understand what you are trying to do
- Entire songs or parts of songs are played or sung
- Among the slowest of communication methods
- Very limited “vocabulary”

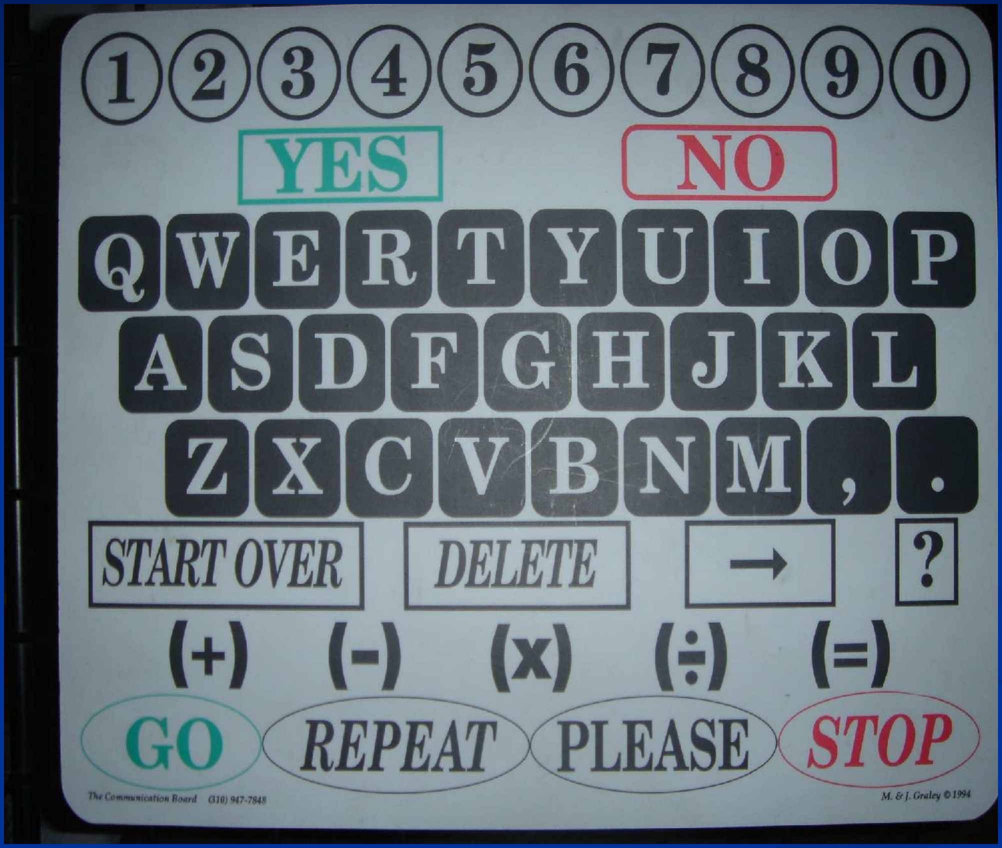
# Art Communication

- Pictures, sculptures, and other forms of art used to express a thought
- Can express thoughts that are otherwise very difficult to express
- Not always recognized as communication
- Interpretations of art can differ

# Example Communication Board


YES
OK
you're close
you're getting closer
you're way off
maybe
I don't know
I don't understand
you've misunderstood
I made a mistake
no symbol
NO
wait a minute
ask me questions
please repeat
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
later
get the other
leave me alone
who
what
when
where
why
how much
how many
not, un
before
after
question
I, me
need
leave
hurt
frustrated
mad
happy
good
problem
glasses
computer
telephone
bathroom
you
want
lie down
remember
hungry
thirsty
excited
bad
pain
wheelchair
back pack
book
home
we/us
don't want
help
think
hot
cold
communication
clothes
pills
movie
drug store
cat
feel
stop
understand
sick
tired
body
money
television
grocery store
forget
go
buy, pay
confused
afraid
bored
funny
headache
store
friend
like
find
depressed
lonely
embarrassed
stinky
library
hate
finish
clean
WORD TROUBLE
ready
favorite
church
The Communication Board (310) 947-7848
M. & J. Graley © 1994

# Example Communication Board


1 2 3 4 5 6 7 8 9 0
YES
NO
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M , .
START OVER
DELETE
→
?
(+) (-) (x) (÷) (=)
GO
REPEAT
PLEASE
STOP
The Communication Board (310) 947-7848
M. & J. Graley ©1994

# Communication Boards

- Most commonly used as a teaching tool to show the value of language
- Some boards can be large with hundreds of symbols. However, most contain a couple dozen or less
- Good if you know what the "script" will look like and that communication won't deviate from that script
- Non-linguistic symbol boards may not be useful if you cannot foresee the direction a conversation will take
- Can be made very cheaply, and used in situations other techniques may not be able to be used (intimate settings, the pool, oxygen tent, etc)

# Tantrums, Meltdowns, Violence, etc.

- Behavior is often a form of communication
- Autistics rarely do something for no reason!
- Often other forms of communication were tried but not listened to, prior to meltdown
- Its important to help a person find other forms of communication that are socially acceptable, but some behavior is unavoidable and a result of disability - thus it requires accommodation

# Linguistic Communication

- Very flexible – in most languages, nearly any idea, opinion, request, or demand can be expressed
- Typically have moderate sized vocabularies
- Requires relatively little "guessing" on part of the communication partner, so unexpected utterances are fairly easy
- Requires ability to cognitively process language
- Requires communication partners to also have literacy in the language

# Pre-Composed Notes – Good & Bad

- Requires fairly good written language skills
- Allows nearly unlimited composition time
- Allows use of spelling and grammar checking tools, proofreading by others, etc.
- Can often hide traits that might be seen as negative (no eye contact, unusual speech “accent”, need to stim, etc.)
- Can help mitigate “working memory” problems

# Pre-Composed Notes - Examples

To get through security at a friend's apartment:

I do not speak.  I am visiting <friend's name>'s apartment, <apt. number>.  I have a key and am in the book.  My name is Joel Smith.

# Pre-Composed Notes - Examples

To buy a meal:

I would like two cheeseburgers and medium fries. I want a large Sprite to drink.

# Pre-Composed Notes - Examples

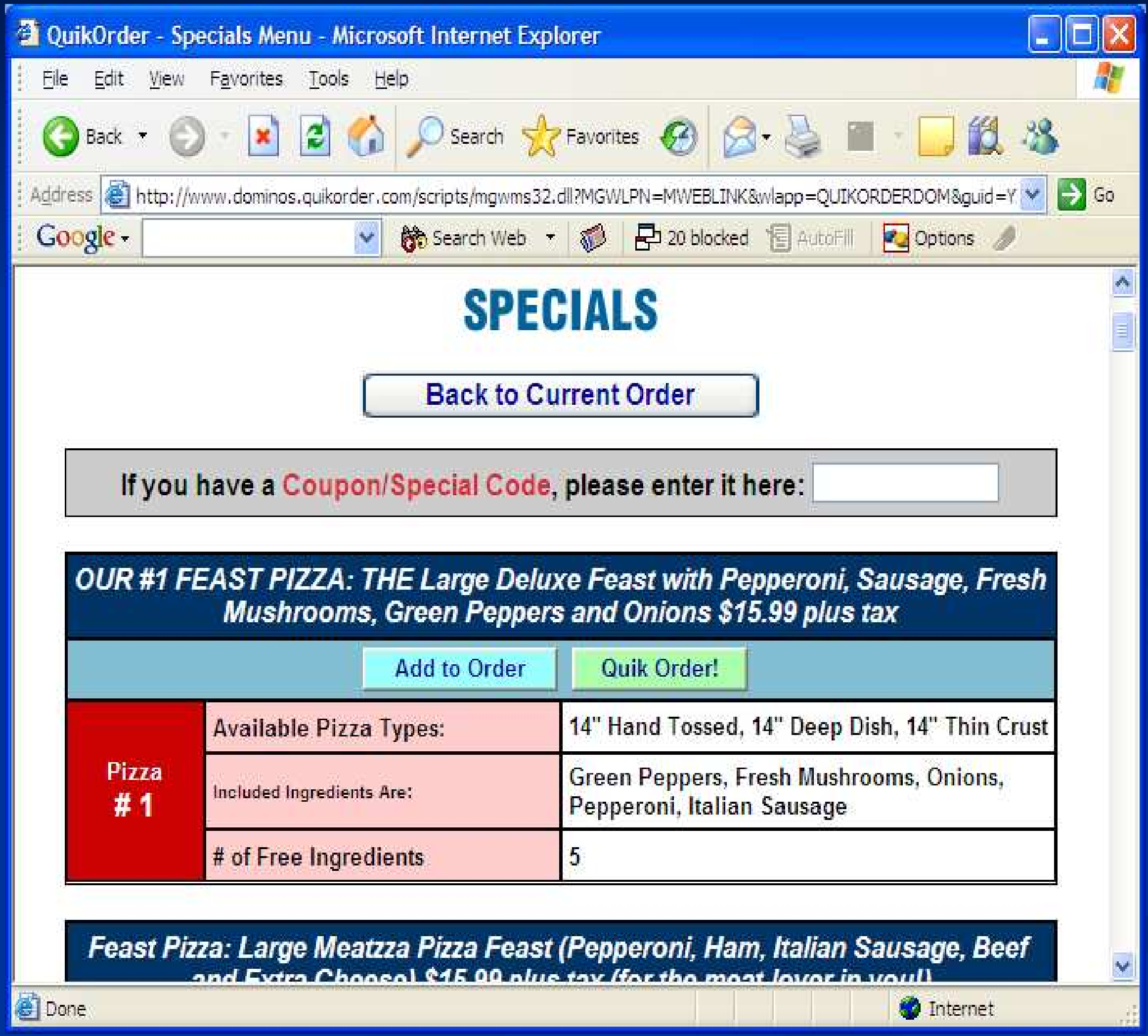
To get back to my car at Denver airport:

M3

# E-Mail, Letters

- People with good written communication look "good" in this medium
- Many business transactions can take place on-line or through mail-order (banking, shopping, personal correspondence, etc)
- For autistics with advanced literacy, this can be a medium of empowerment

# Internet or Mail Ordering


QuikOrder - Specials Menu - Microsoft Internet Explorer
File
Edit
View
Favorites
Tools
Help
Back
Search
Favorites
Address
http://www.dominos.quikorder.com/scripts/mgwms32.dll?MGWLPN=MWEBLINK&wlapp=QUIKORDERDOM&guid=Y
Go
Google
Search Web
20 blocked
AutoFill
Options
Back to Current Order
Add to Order
Quik Order!
Done
Internet

## SPECIALS

If you have a Coupon/Special Code, please enter it here:

**OUR #1 FEAST PIZZA: THE Large Deluxe Feast with Pepperoni, Sausage, Fresh Mushrooms, Green Peppers and Onions $15.99 plus tax**

| | | |
|---|---|---|
| Pizza # 1 | Available Pizza Types: | 14" Hand Tossed, 14" Deep Dish, 14" Thin Crust |
| | Included Ingredients Are: | Green Peppers, Fresh Mushrooms, Onions, Pepperoni, Italian Sausage |
| | # of Free Ingredients | 5 |

**Feast Pizza: Large Meatzza Pizza Feast (Pepperoni, Ham, Italian Sausage, Beef and Extra Cheese) $15.99 plus tax (for the meat lover in you!)**

# Instant Messaging (IM)

- Requires a computer and internet connection
- Good for autistics who have problems with speech
- Eliminates non-verbal signals from the communication
- Little feed-back while other party is composing message, causing “out of order” messages

# Sign Language

- Requires ability to learn a language
- Limited number of communication partners
- May be difficult for people with motor control issues
- Relies somewhat on facial expressions, eye contact, etc.
- May be good if you have severe CAPD but little problem with language and real-time communication

# Interactive Handwriting

- Requires literacy of both sender and receiver
- Does not solve “real-time” issues
- Very cheap! Can be used when more expensive solutions cannot, such as in wet or high crime environments
- Easy to use, requires little training if handwriting is legible and literacy is achieved

# Portable Text-to-Speech Synthesizers

- Require good language skills
- Easier to use with good typing speed and spelling ability
- Good for interacting with unfamiliar people where the message can be complex
- Often only practical means of communicating to a group interactive without someone else’s assistance
- Can be used over the telephone
- Very expensive ($2,500-$16,000 USD new), although used units can be found significantly cheaper (Ebay – anywhere from $15 on up, depending on age and condition of device)

# Speech Synthesizers - Problems

- Often too quiet in noisy environments (restaurants, break times with large groups, train stations, etc)
- Often too loud in other environments (libraries, church) – can be considered disruptive by others
- Can be frustrating – spelling and speech synthesizer limitations often cause mispronunciations
- Unusable in some environments (moisture, high crime, at dark or in direct sunlight)
- English (American dialect) male voices are easiest to understand
- Foreign person and place names are almost always mispronounced
- If you are bilingual, you may need a multilingual device

# TTY (TDD)

- Designed as a way of using the telephone by deaf people
- Great for calling large businesses in countries with disability accommodation laws (avoid long hold times, communicate clearly)
- Can be used with relay services where an operator translates between you're your TTY and a receiver who uses a different mode of communication (including a receiver who speaks normally and doesn't use a TTY)
- Internet relay is also an option for many
- People with communication disabilities may qualify for a free TTY from their government
- Requires understanding some basic TTY etiquette

# TTY - Problems

- Requires good language skills
- Slower then normal phone conversation
- No “interrupting” each other
- Internet relay (and sometimes non-internet relay) is associated with fraud
- Hard to use with public phones and wireless phones
- International calls may require a device that can speak at two different rates (US and some other nations use 45 baud while most nations use 50 baud)

# Facilitated Communication (FC)

- FC involves the physical support of a person communicating, often supporting the wrists, arms, or shoulder
- There is real communication taking place today because of FC
- There is also influenced communication (“puppet on a string”) taking place in the name of FC
- FC appears to deal with Parkinson-like motor planning issues that have been found in autistics
- Independent communication is always a long range goal, but its important to consider realities and allow other communication in the short term

# What I Use

- Lightwriter and Link as portable text-to-speech synthesizers
- Handwriting
- Gestures
- “Vocalizations”
- Speech
- Text-to-speech computer program
- TTY
- Email & Instant Messaging
- Pre-composed written messages
- Familiar friends and family

# PART III

## PREJUDICE & IGNORANCE

# Common Reaction (in most of US & Canada)

- People assume you are deaf
- If you walk and otherwise outwardly appear normal, people don't seem to make assumptions about intelligence
- If a technological device is used, people are very curious
- No "active" discrimination
- Other then curiosity, most people do not make a big deal of it and just interact fairly normally

# Less Common Reaction (in most of US and Canada)

- You are less intelligent then average (especially if you use other forms of assistive technology or you "look" disabled)
- You are disruptive (speech devices in particular are often louder then desired)
- People speak to you in "child" voices and phrases
- Some people think you're an "asshole" when you are now able to speak things I couldn't speak before
- In workplace, written forms of communication can sometimes be considered more likely to cause arguments – "We need more facetime among employees"

# Professional Attitudes

- People with moderate sized vocabularies and good word pronunciation, and who can use language, are assumed to not be a group that would benefit with alternatives to real-time speech
- Once a person develops any amount of speech, it's assumed that speech *should* become the main form of communication
- There is an assumption that IQ, "functioning level" or other bogus measures can be used to figure out who would benefit from alternatives to real-time speech
- Often address alternatives to speech but not the real-time component – either or both may be problematic

# Autistic Attitudes

- Sometimes will misapply the terms “selective” and “elective” mutism (my pet peeve – you know less about my speech problems then I do, so don’t diagnose me!)
- Most autistics don’t have a problem with others using alternative means of communication
- May be significantly more curious than most people
- People with CAPD may have a hard time understanding synthetic voices
- Many autistics who communicate with real-time speech have a hard time with “turn taking”

# Other Difficulties

- Group conversation is very difficult as it is very hard without using a natural voice to indicate a desire to participate – and speech devices don’t allow the precise timing that this requires
- Most linguistic methods are best suited for seated positions – some are very difficult to use while walking or standing
- Employers will initially see someone who does not use real-time speech as someone who is less able to do the job
- All alternatives to speech, except perhaps sign language, are extremely slow compared to speech
- All alternatives to real-time communication and some alternatives to speech are prone to misunderstandings (especially emotional content)

# Personal Attitudes

- “I am faking this”
- “I’m doing this for attention”
- “I’m not disabled enough to need this”
- “Speech is better”

# MOST IMPORTANT POINT

It is okay to not communicate "normally"

# QUESTIONS

???