GDC SUMMER

GAME DEVELOPERS CONFERENCE

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Accessibility Best Practices

In Game Communication

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General Disclaimers

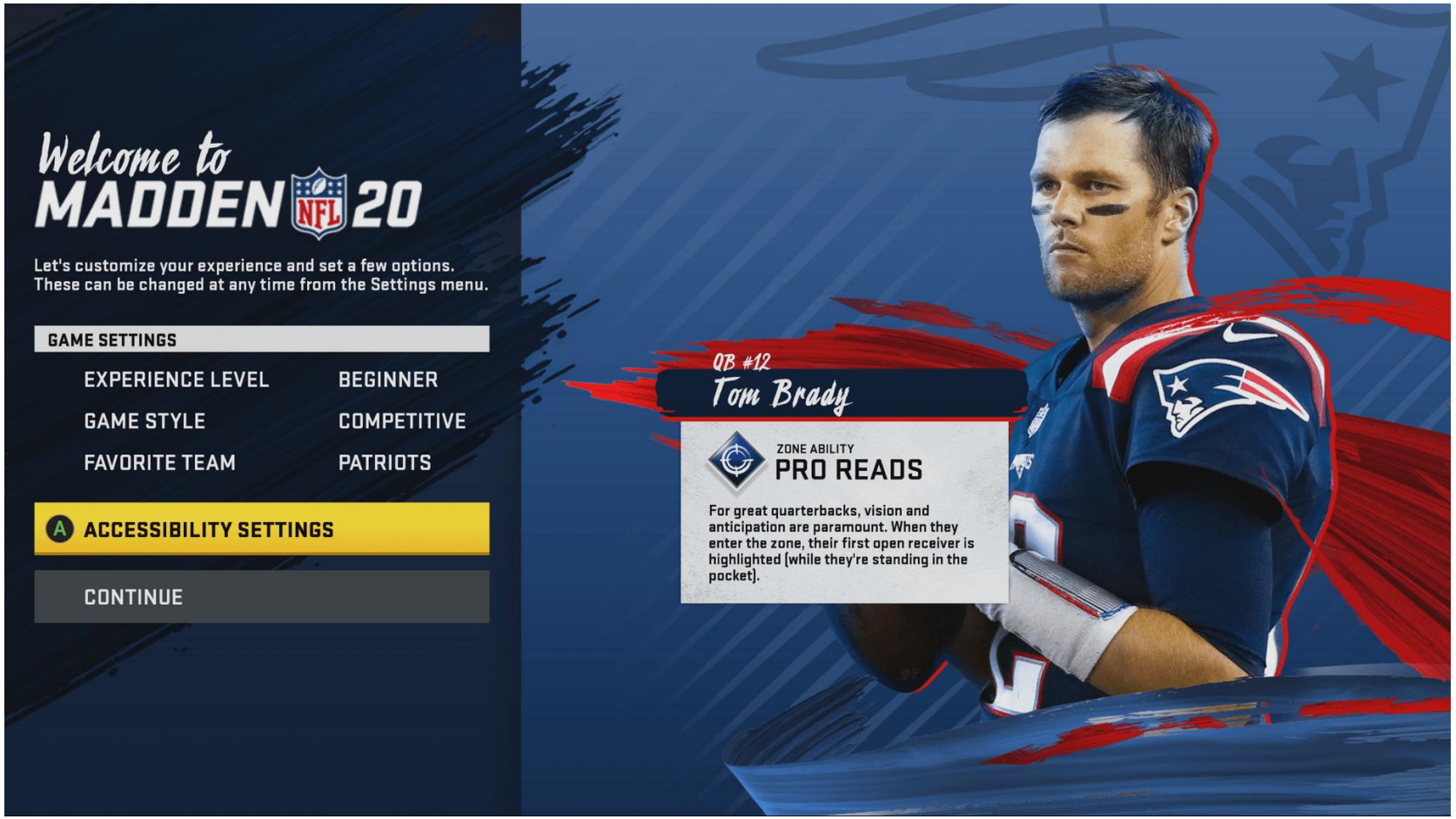
- This is a best practices presentation based on observations and experience, but in no way is a promise as to how past, current, or future games may be made

What is Accessibility?

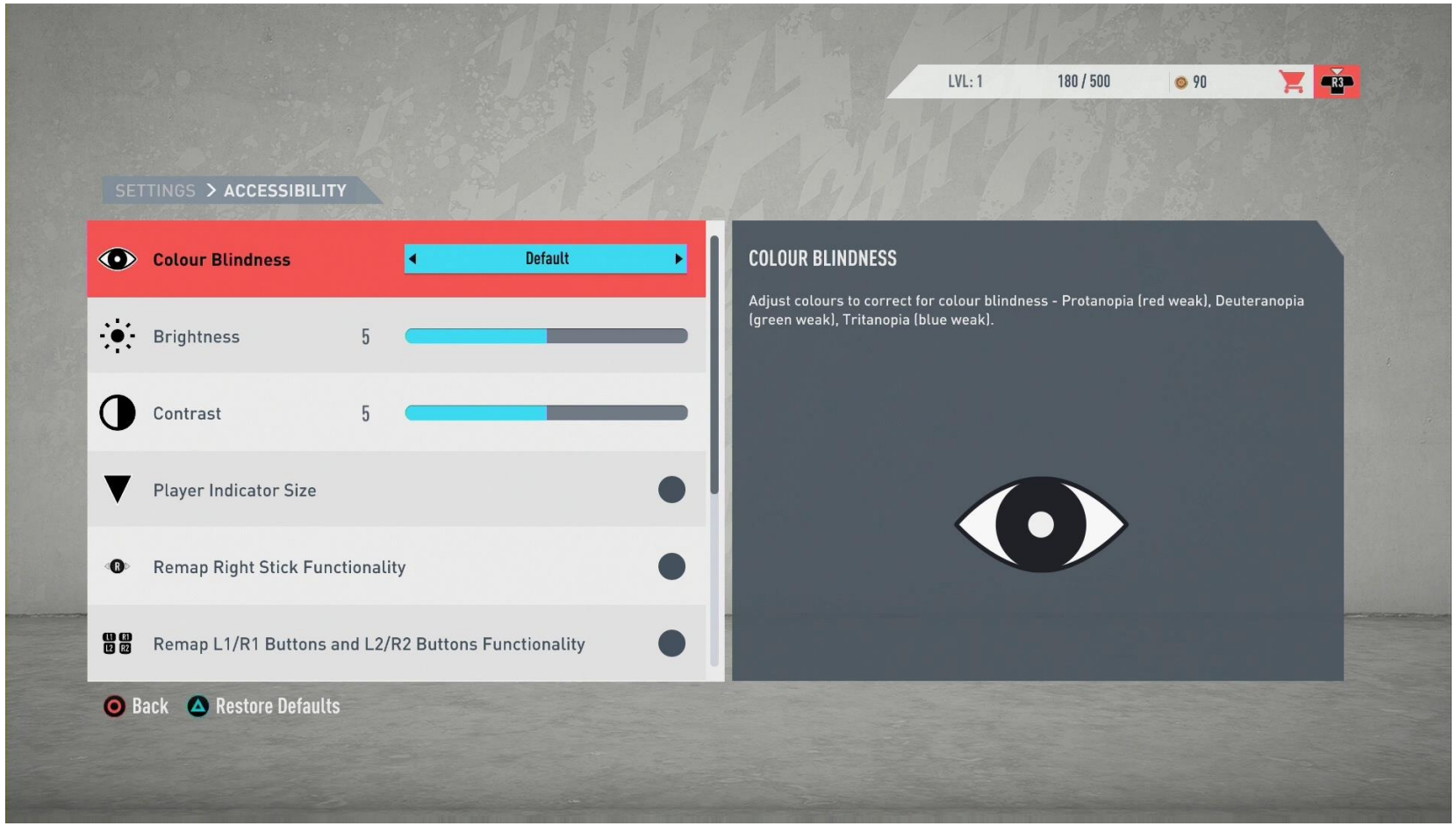
- The correction of a mismatch between a person and their environment

- If settings are not accessible, then they might as well not exist

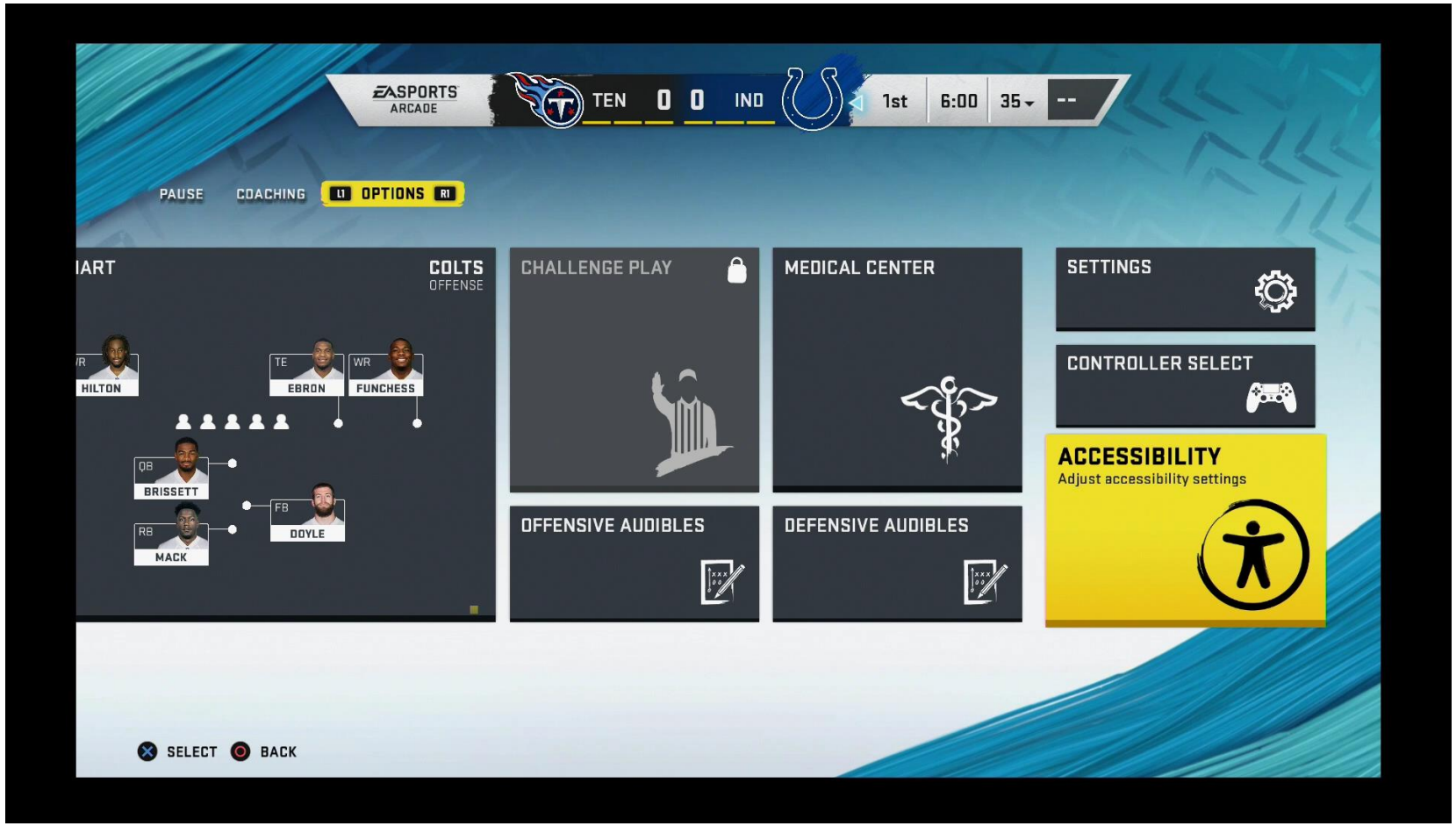
Welcome Screen



Accessibility Menu



Pause Menu


EASPORTS ARCADE
TEN 0 0 IND
1st
6:00
35
--
PAUSE
COACHING
L1 OPTIONS R1
ART
COLTS
OFFENSE
HILTON
TE
EBRON
WR
FUNCHESS
QB
BRISSETT
RB
MACK
FB
DOYLE
CHALLENGE PLAY
MEDICAL CENTER
SETTINGS
CONTROLLER SELECT
ACCESSIBILITY
Adjust accessibility settings
OFFENSIVE AUDIBLES
DEFENSIVE AUDIBLES
SELECT
BACK

In-Game Communication

Allow players to communicate with one another in an accessible way

Legible Font

- Min 28 pixels tall, 3 pixels wide, 1080p
- 4.5:1 contrast ratio or better
- San serif fonts a must, additional fonts are OK
  - Examples: Arial, Helvetica, Verdana, Comic Sans
- Optional/configurable colors are a plus
- Resize is recommended!

Menu Narration

Provide an audible means of navigating menus and game experiences

Menu Narration

- Wording matters
  - Control name (Chat Volume)
    - Control name (Slider from 1 to 100)
    - Active setting state (50)
    - Control type/behavior (Selected)
  - Can be shortened when sliding (51, 52…)
- Narrate items without navigation
- Windows narrator is a great resource

Pre-Recorded Menu Narration

Pre-Recorded Menu Narration

- Potential benefits
  - Straight-forward to add to game
  - Sounds exactly as intended
- Potential drawbacks
  - Needs updating when menus change
  - May require a lot of audio files

Generated Menu Narration

Generated Menu Narration

- May sound robotic
  - Plus side, this lends itself to audio speed adjustments
    - Expert screen readers prefer super fast audio
  - May sound odd to those not expecting it
    - Those not expecting it are unlikely to be using it

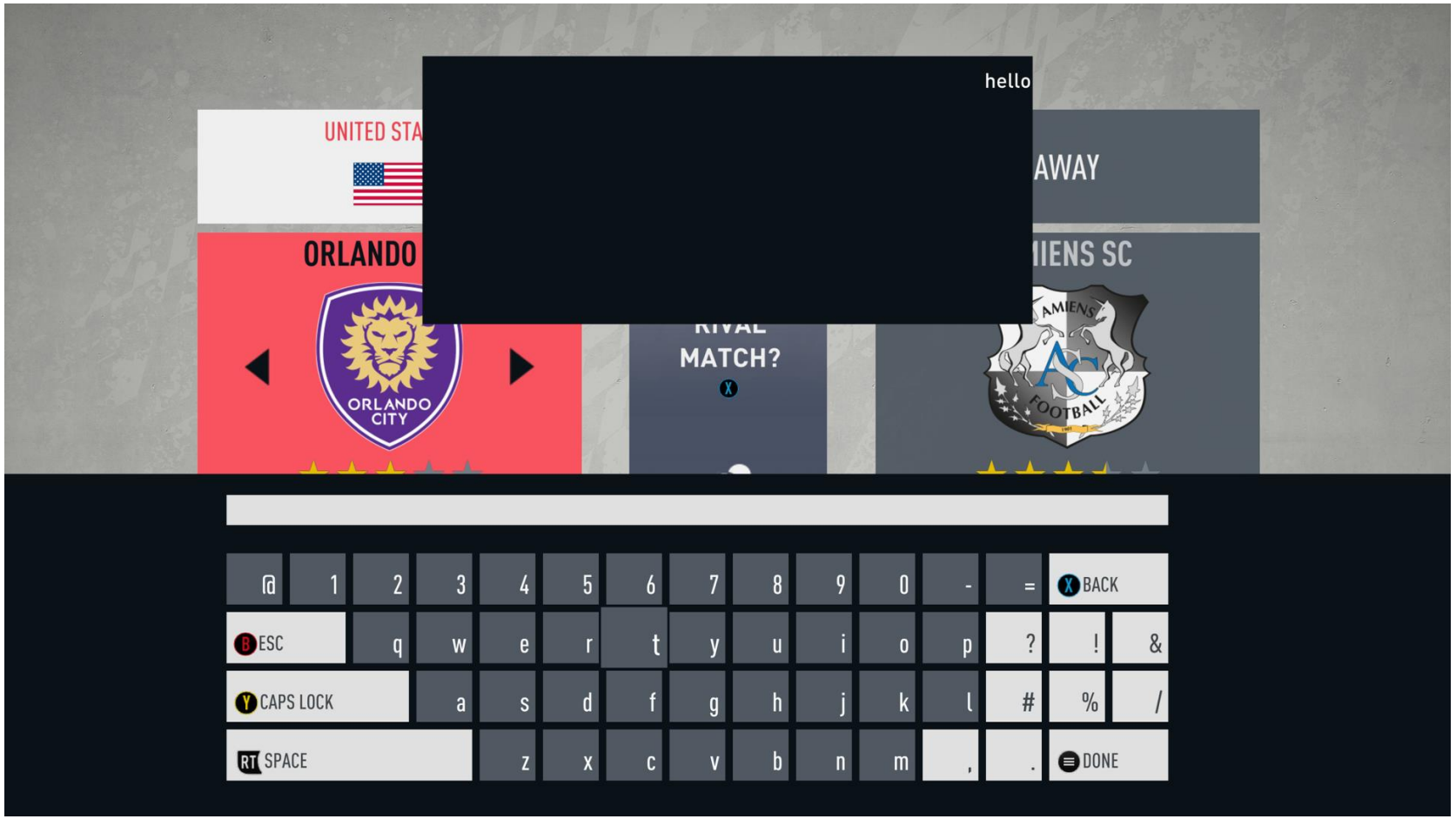
Generated Menu Narration

- Pluses
  - No audio files are required
  - Deep UI integration can yield great coverage
    - In Madden NFL 20, menu narration is done at the widget level, so common controls “turned on” at once

Generated Menu Narration

- Drawbacks
  - More technically challenging to integrate
  - Requires additional processing power and/or cloud services
    - Cloud services often have a transaction fee
  - Language support may be limited

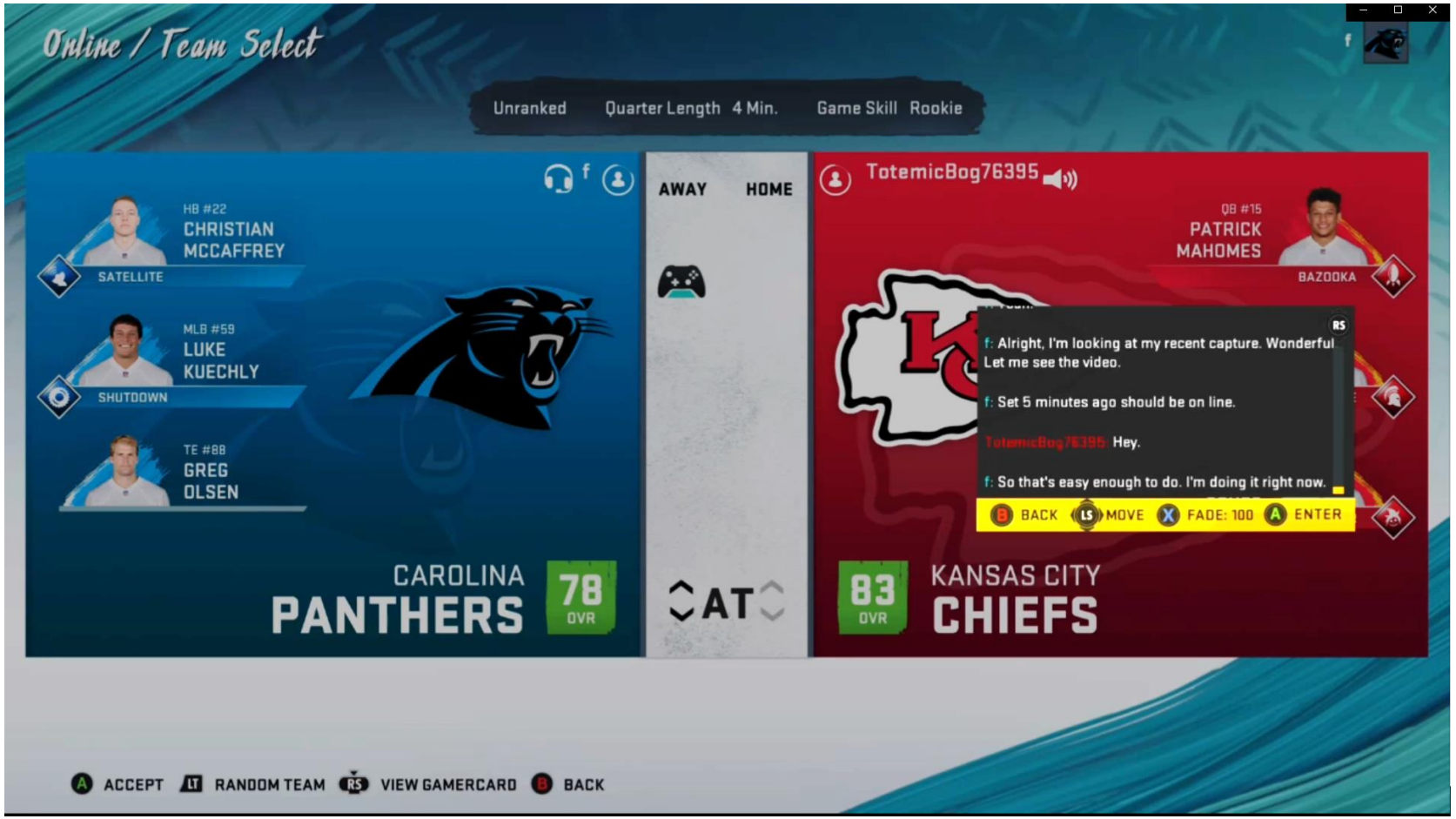
Text Chat


hello
UNITED STA
AWAY
ORLANDO
IENS SC
MATCH?
ORLANDO CITY
AMIENS
FOOTBALL
BACK
ESC
CAPS LOCK
SPACE
DONE

Text Chat

- Avoid holding down multiple buttons
- Stay in the game
- Potential window options
  - Position, size, transparency
  - Chat history and scrolling
  - Keyboard narration
    - System keyboards use system narration
    - Custom keyboard need support too

Voice Chat


Online / Team Select
Unranked
Quarter Length 4 Min.
Game Skill Rookie
AWAY
HOME
HB #22
CHRISTIAN MCCAFFREY
SATELLITE
MLB #59
LUKE KUECHLY
SHUTDOWN
TE #88
GREG OLSEN
CAROLINA PANTHERS
78 OVR
AT
TotemicBog76395
QB #15
PATRICK MAHOMES
BAZOOKA
f: Alright, I'm looking at my recent capture. Wonderful Let me see the video.
f: Set 5 minutes ago should be on line.
TotemicBog76395: Hey.
f: So that's easy enough to do. I'm doing it right now.
B BACK
LS MOVE
X FADE: 100
A ENTER
83 OVR
KANSAS CITY CHIEFS
A ACCEPT
LT RANDOM TEAM
RS VIEW GAMERCARD
B BACK

Voice Chat

- Transcribed audio may use text chat for display purposes
- Text chat narration also important
- Speaker indicators recommended
  - Notification that speech exists
  - Identifies who is speaking

Voice Chat
With Transcription

Canned Chat

Apex Legends
TotemicBog76395 pinged loot: [Double Tap Trigger]
TotemicBog76395 - Canceled ping.
TotemicBog76395 pinged loot: [Double Tap Trigger]
You - Looting over here.
TotemicBog76395
WATCHING HERE
Y QUIPS
B BACK
TotemicBog76395: [VoIP] right homes that are not a doubt yourself so for instance you can write from the perspective of an animal or a and then on
HOLD FOR 1 SECOND TO CHAT
Gibraltar: Too slow. Too weak. Haha. Whatever the case I got you.
Gibraltar: Got a Hop-Up here.
Gibraltar: Never mind.
TotemicBog76395
P2020

Canned Chat

- Often is in the form of a list or a chat wheel of pre-selected phrases
  - Phrase customization options are a bonus
- Phrases can be context-based
- Avoid holding down multiple buttons, including sticks and d-pad buttons

Canned Chat

Canned Chat Customization

Emotes

Lost Arcanist
Locate Matthias Sumner
Follow Signal
D4 0gR3aper579
DillansDad55
TotemicBog76395
Clap
Cooled
TotemicBog76395: Thanks!
f: Thanks!
f: Okay
TotemicBog76395: Greetings
f: Greetings
TotemicBog76395: Thanks!
40
16
112

Emotes

- Emotes are animations that allows characters to express themselves
  - Menu narration still applies

- Consider routing all emote and quip type messages to text chat for when an emote is used
  - Provides narration support

Emotes

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- Optional/configurable colors are a plus
- Resize is recommended!

Narration and Transcription Tools

- Local text to speech:
  - http://Cmuflite.org
- IBM Watson Cloud TTS/STT:
  - https://www.ibm.com/cloud/watson-text-to-speech
  - https://www.ibm.com/cloud/watson-speech-to-text
- Xbox One / Windows 10 native TTS / STT

Additional tools

- Contrast measurements
  - http://contrast-ratio.com
- EA's accessibility portal
  - http://ea.com/able
- Twitter: http://twitter.com/ea_accessible
- Email: able@ea.com