MICHIGAN STATE UNIVERSITY

SERIOUS GAMES

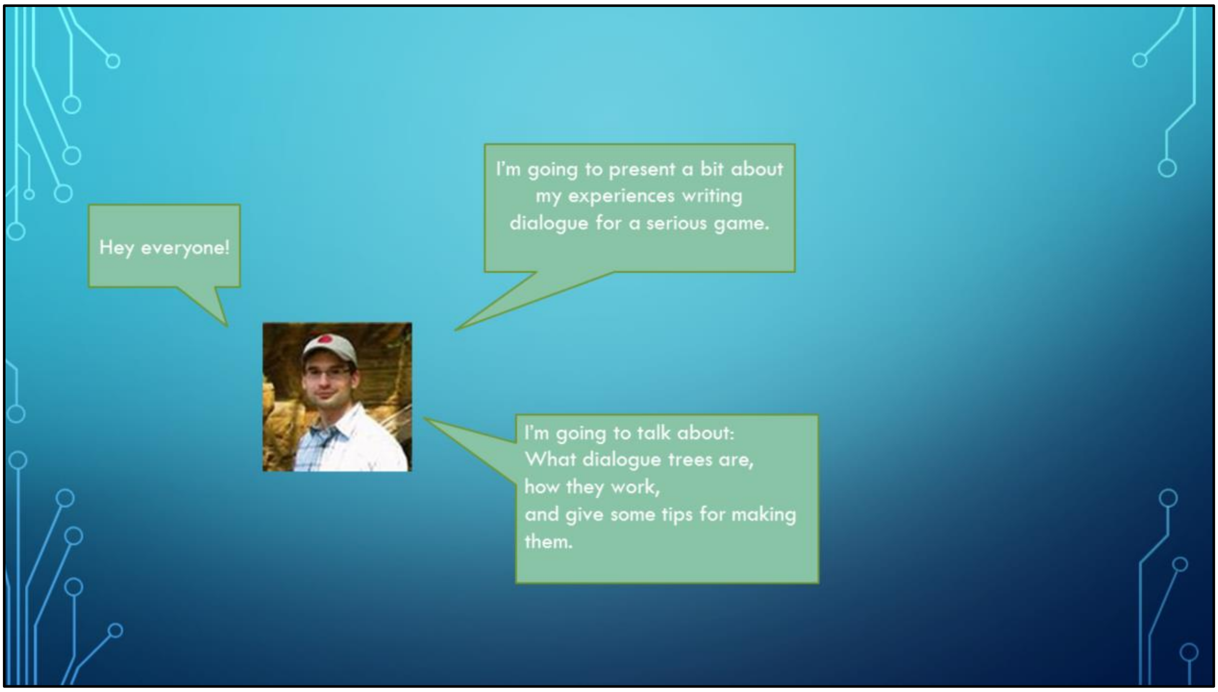
GRADUATE CERTIFICATE

DIALOGUE TREES

MINI-LECTURE

BY DAVE SANDOR

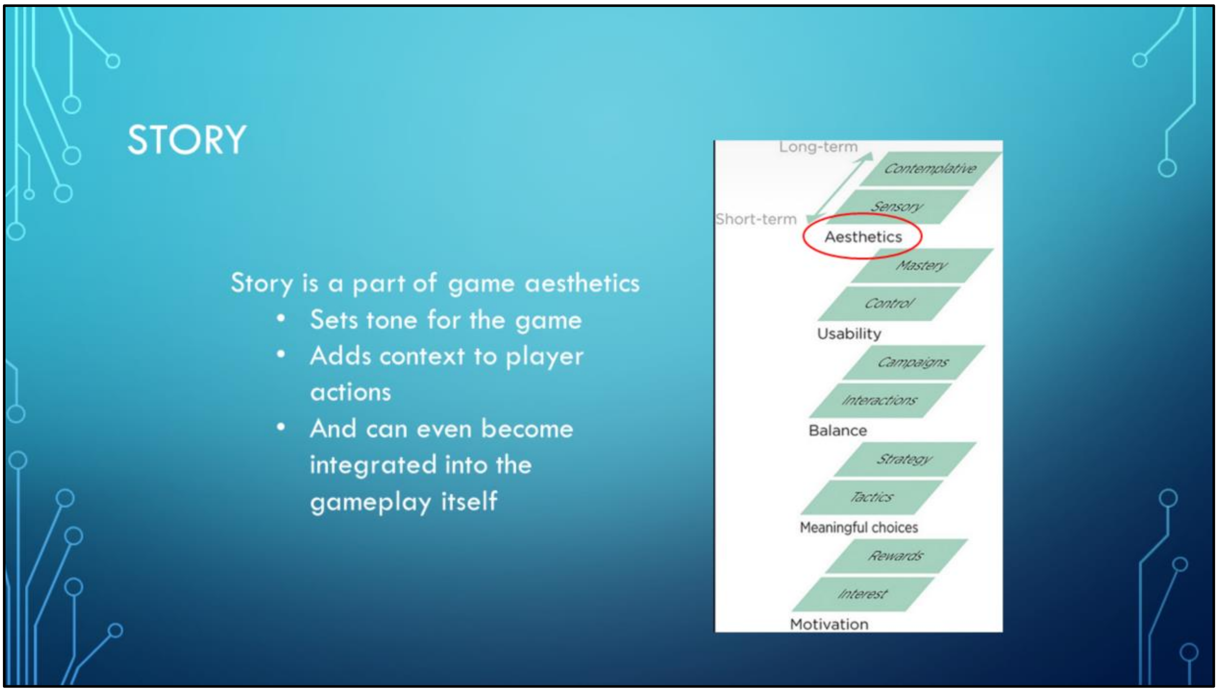
TC830-SPRING 2014-ONLINE



Hey everyone!

I'm going to present a bit about my experiences writing dialogue for a serious game.

I'm going to talk about:
What dialogue trees are,
how they work,
and give some tips for making them.

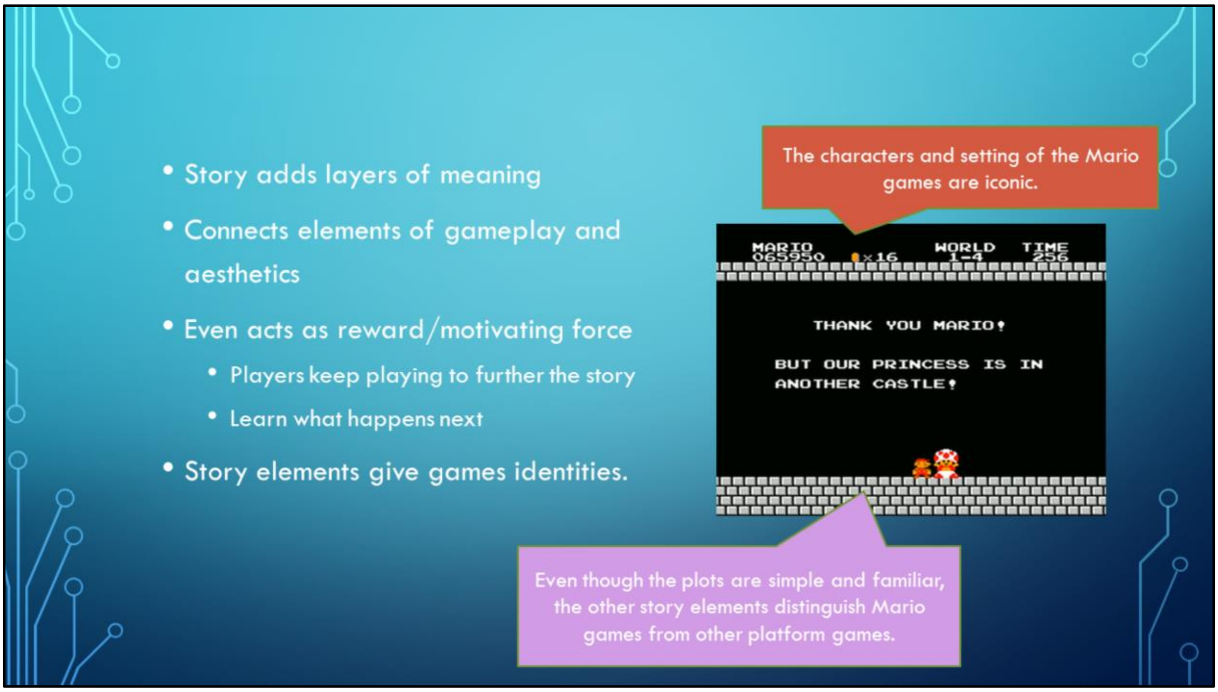


STORY

Story is a part of game aesthetics

- Sets tone for the game
- Adds context to player actions
- And can even become integrated into the gameplay itself

Earlier in the course, we learned that story is a part of game aesthetics. Along with elements like images, sounds, and even haptic feedback, story can help to set the tone for a player’s experience. Story can have a profound impact on a game’s other aesthetic elements, and it can even be integrated into the game mechanics.



- Story adds layers of meaning
- Connects elements of gameplay and aesthetics
- Even acts as reward/motivating force
  - Players keep playing to further the story
  - Learn what happens next
- Story elements give games identities.

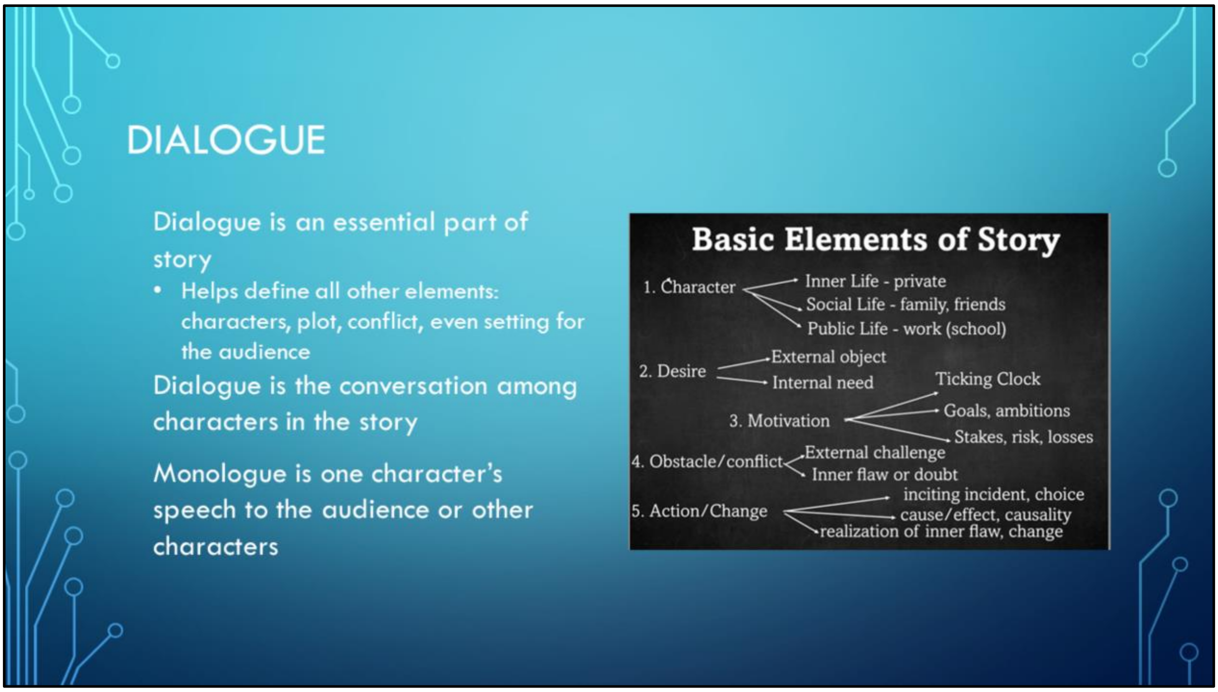
The characters and setting of the Mario games are iconic.

THANK YOU MARIO!

BUT OUR PRINCESS IS IN ANOTHER CASTLE!

Even though the plots are simple and familiar, the other story elements distinguish Mario games from other platform games.

In most games, players want to have some explanation of how all of the game events and objectives fit together. They want to understand who the characters are and how the character or avatar they play fits into the game world. This is what story does. Story creates context and adds layers of meaning to the actions players take and the choices they make. Story can even act as a reward--in some games, players complete objectives mainly to further the story and see what happens next. No matter how deeply ingrained story may be in the game design, it can help to give games unique, memorable identities.



DIALOGUE

Dialogue is an essential part of story

- Helps define all other elements: characters, plot, conflict, even setting for the audience

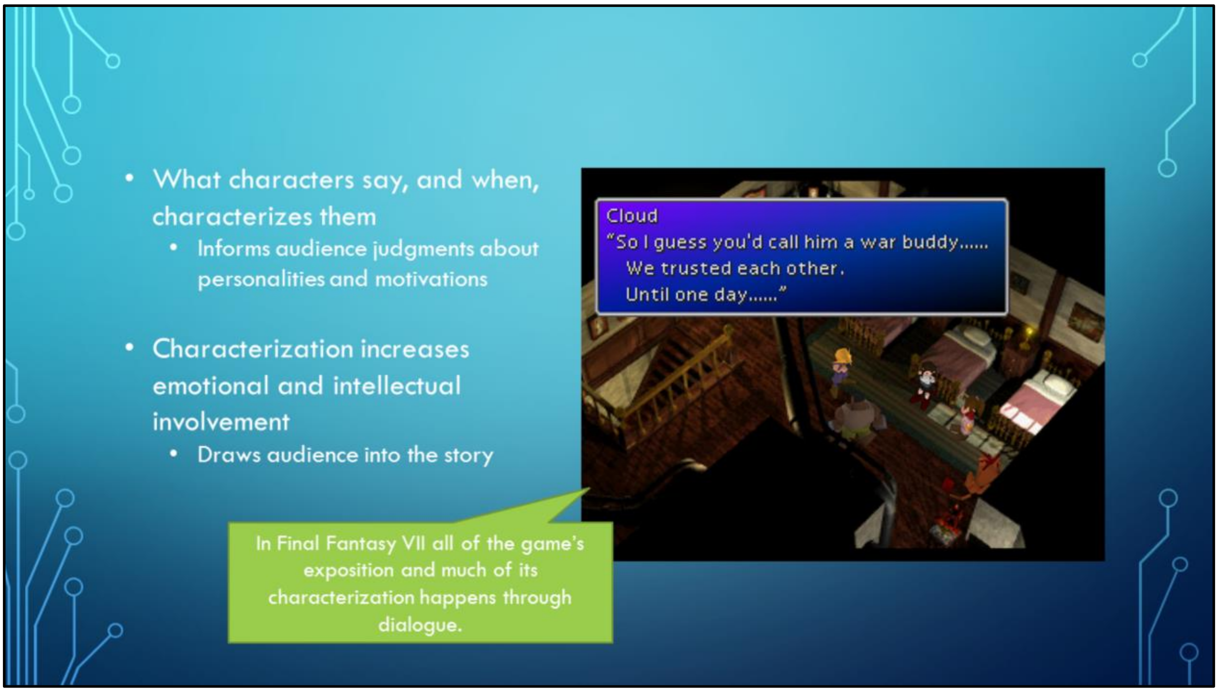
Dialogue is the conversation among characters in the story

Monologue is one character's speech to the audience or other characters

Basic Elements of Story

1. Character
   - Inner Life - private
   - Social Life - family, friends
   - Public Life - work (school)
2. Desire
   - External object
   - Internal need
3. Motivation
   - Ticking Clock
   - Goals, ambitions
   - Stakes, risk, losses
4. Obstacle/conflict
   - External challenge
   - Inner flaw or doubt
5. Action/Change
   - inciting incident, choice
   - cause/effect, causality
   - realization of inner flaw, change

Dialogue is an essential part of story and characterization. Typically, all of the other elements that create a story--characters, conflict, plot, and setting emerge through dialogue. Dialogue is the conversations between characters in the story. It's through these conversations that an audience relates to the characters, and it's through an understanding of the characters that a plot has meaning and a setting real significance. Stories may also include monologues, which are a single character's speech to the audience or to other characters. Monologue has a similar function as dialogue, except monologues are one-sided and sometimes private. The audience hears everything, but other characters in the story may not.

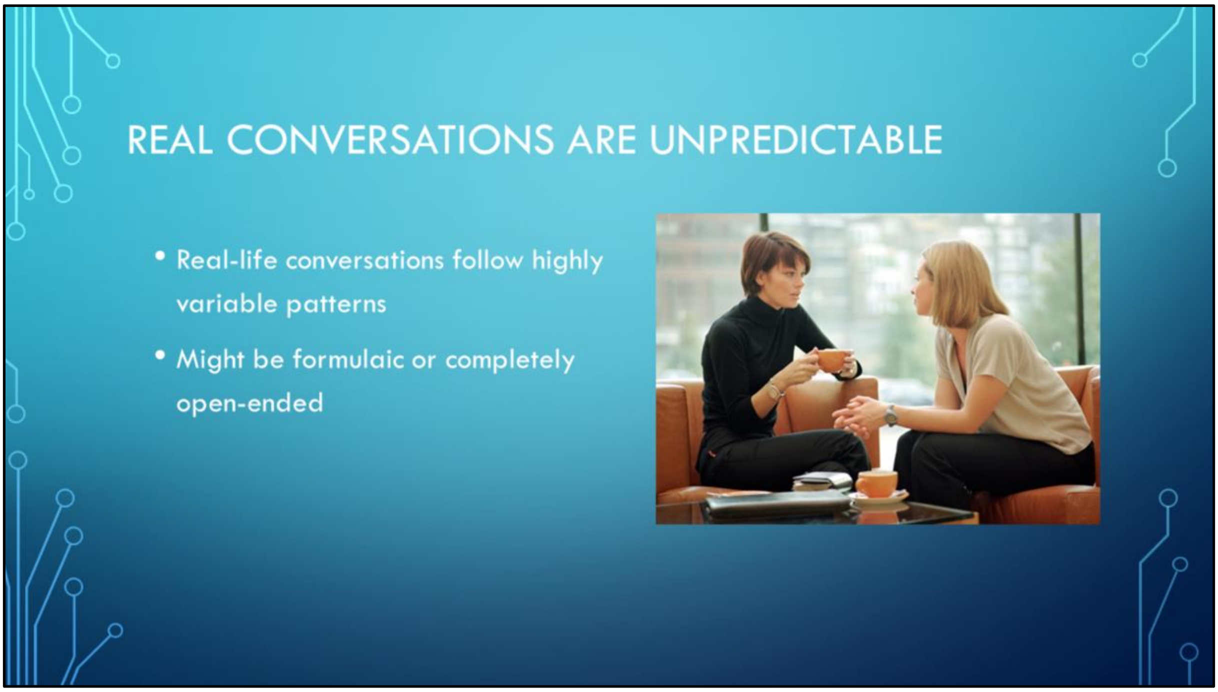


- What characters say, and when, characterizes them
  - Informs audience judgments about personalities and motivations
- Characterization increases emotional and intellectual involvement
  - Draws audience into the story

Cloud
“So I guess you'd call him a war buddy......
We trusted each other.
Until one day......”

In Final Fantasy VII all of the game's exposition and much of its characterization happens through dialogue.

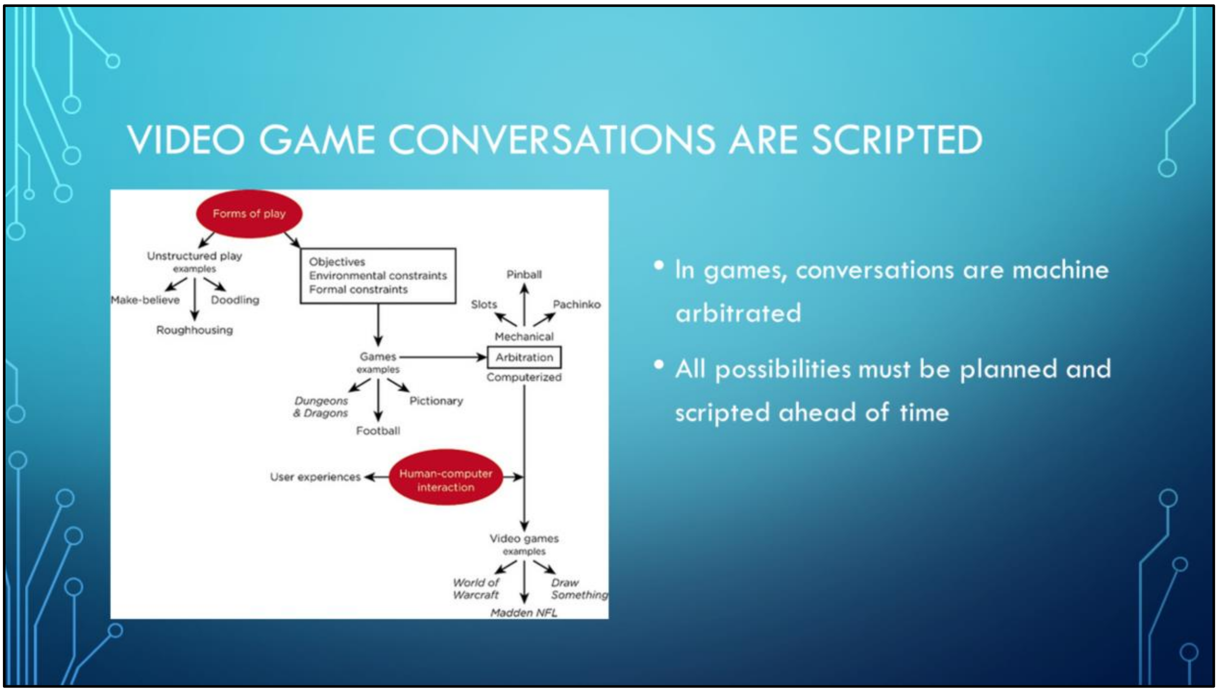
When multiple characters are involved in a story, they typically interact through dialogue in the form of commentary, questions, and verbalized reactions to each other about each other, the surrounding environment and events in the story. The things characters say and when they say them help to define those characters. The audience makes judgments about the character’s personalities and motivations. For example, you might learn that an outwardly jovial character has a tragic past, or the brave hero isn’t quite as brave (or competent) as he appears to be. There are countless possibilities. But, the more characterization a story includes, the more likely it is that the audience will imagine the characters as actual people and become intellectually and emotionally invested in their fictional lives.



REAL CONVERSATIONS ARE UNPREDICTABLE

- Real-life conversations follow highly variable patterns
- Might be formulaic or completely open-ended

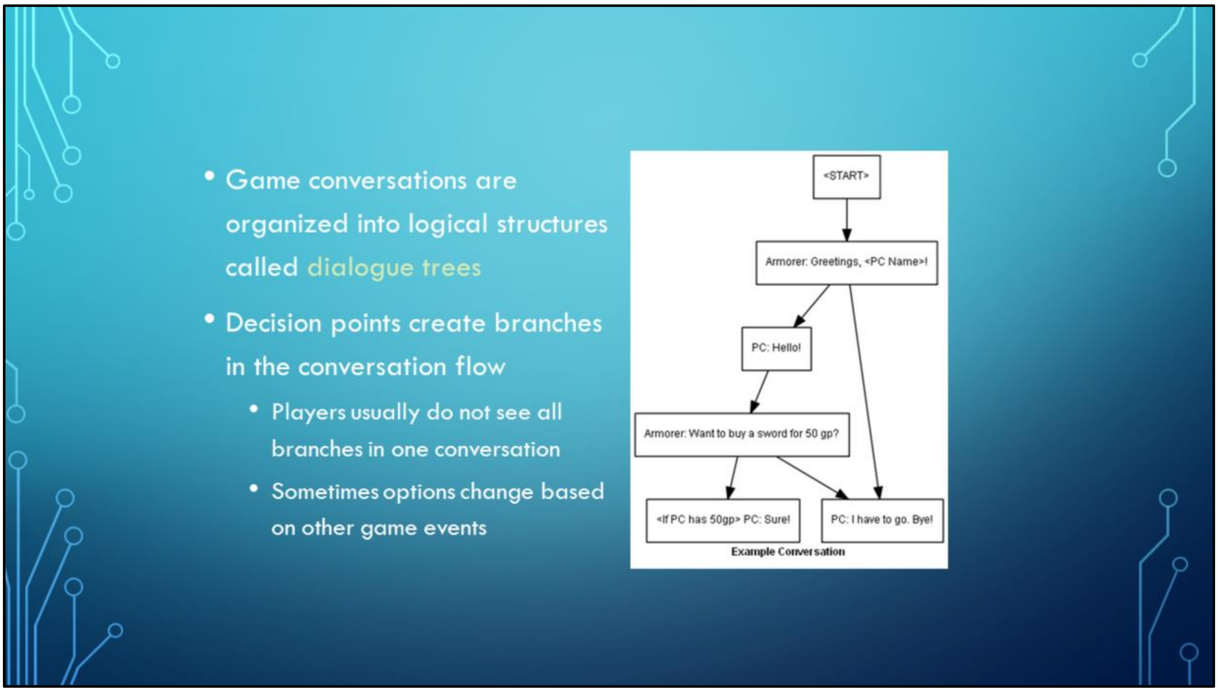
In real life, conversations follow highly variable patterns. They might be rehearsed and formulaic, or they might be completely open-ended. The shape and content of conversations depends entirely on the people involved and the situation they're in. It's hard to know, when one starts, quite where it will end up resolving.



VIDEO GAME CONVERSATIONS ARE SCRIPTED

- In games, conversations are machine arbitrated
- All possibilities must be planned and scripted ahead of time

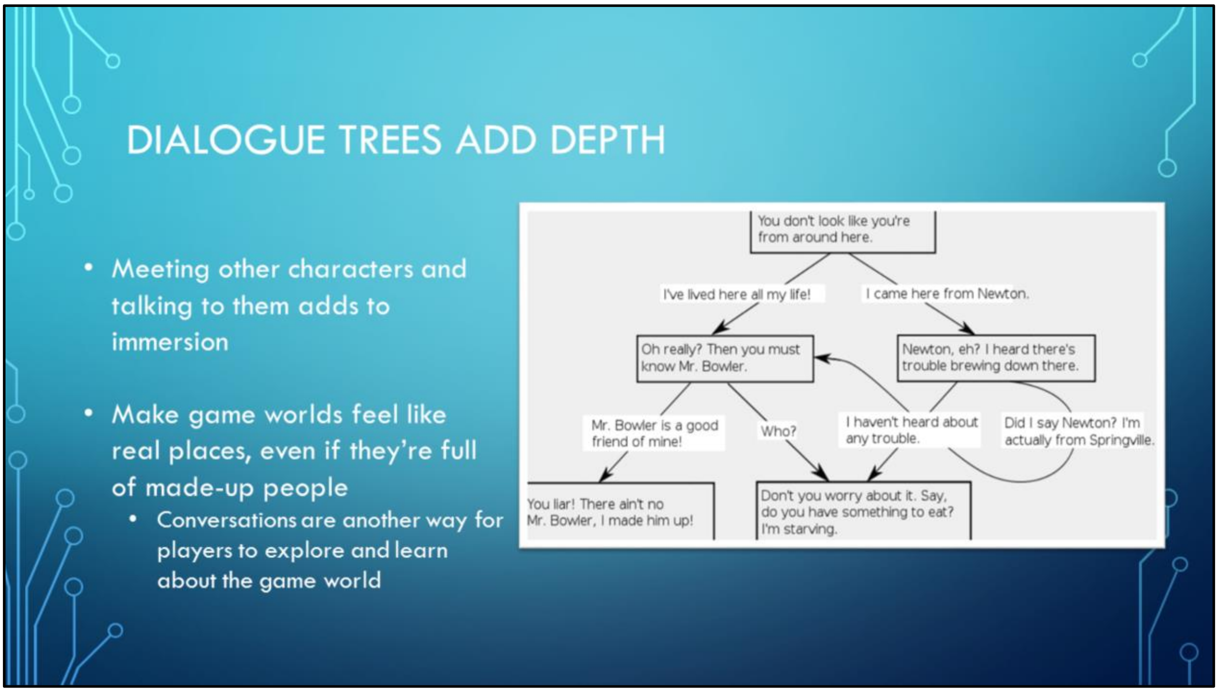
In video games, though, all conversations have to be pre-scripted. Conversations are machine arbitrated, meaning they start when the game programming recognizes that some condition, or event trigger, has been met, and they end the same way. There are lots of ways that conversations might be triggered and shaped in games, but they all must be pre-determined and programmed before the player is involved.



- Game conversations are organized into logical structures called dialogue trees
- Decision points create branches in the conversation flow
  - Players usually do not see all branches in one conversation
  - Sometimes options change based on other game events

<START>
Armorer: Greetings, <PC Name>!
PC: Hello!
Armorer: Want to buy a sword for 50 gp?
<If PC has 50gp> PC: Sure!
PC: I have to go. Bye!
Example Conversation

In role-playing games, player’s often engage in dialogue with other characters. The player’s avatar is given choices about which character to talk to, at what time, and even what things to talk about. These dialogue choices and corresponding responses are organized into logical structures called dialogue trees. They are so called because each decision point creates a branch in the conversation flow. Players usually do not see all branches in one conversation; they make a choice and are carried through to the resolution for that choice. In some games, branches may change based on game events outside of the conversation choices.



DIALOGUE TREES ADD DEPTH

- Meeting other characters and talking to them adds to immersion
- Make game worlds feel like real places, even if they're full of made-up people
  - Conversations are another way for players to explore and learn about the game world

You don't look like you're from around here.

I've lived here all my life!

I came here from Newton.

Oh really? Then you must know Mr. Bowler.

Newton, eh? I heard there's trouble brewing down there.

Mr. Bowler is a good friend of mine!

Who?

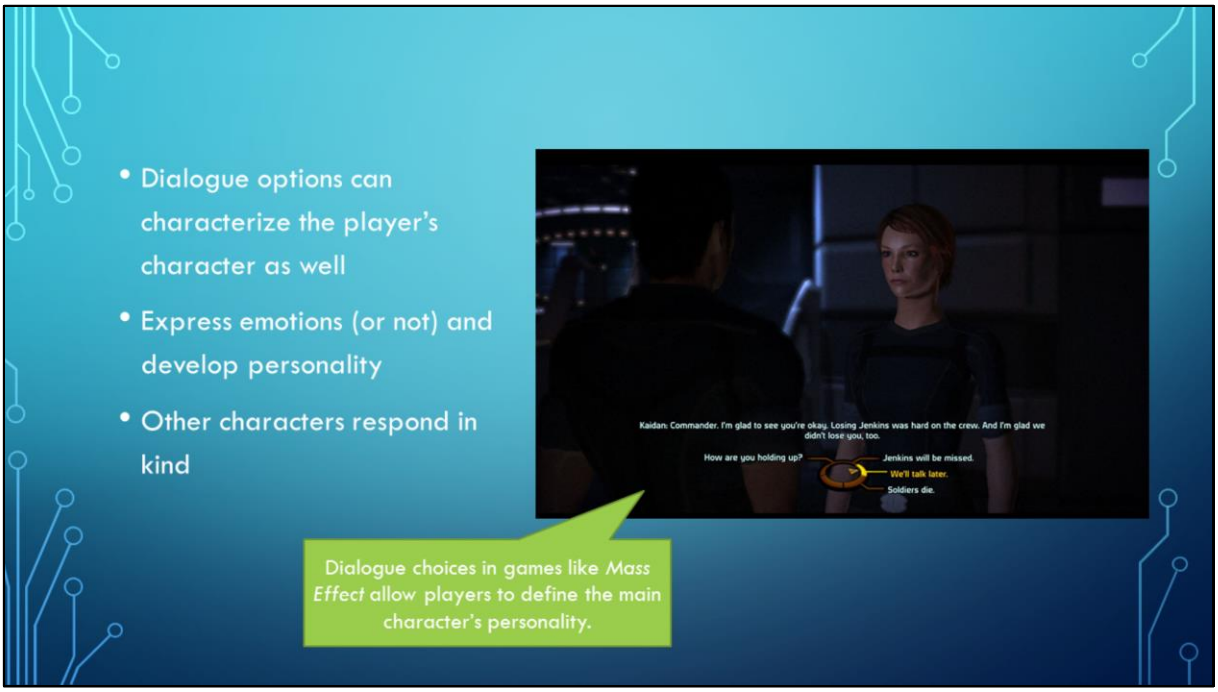
I haven't heard about any trouble.

Did I say Newton? I'm actually from Springville.

You liar! There ain't no Mr. Bowler, I made him up!

Don't you worry about it. Say, do you have something to eat? I'm starving.

Dialogue trees can be used to add depth to a game world in a couple of ways. Expository information can be presented to the player through these conversations, meaning that the player can choose how much of the information to explore. They aren't forced to view it through cut scenes or mandatory game events. Giving other characters in the game things to say also helps to deepen the player's feeling of immersion. If they go to a town, they expect to see it populated. And if the people in the town have interesting things to say, then they feel more like real people, making the town feel more like a real place, making it easier for the player to get into the experience.

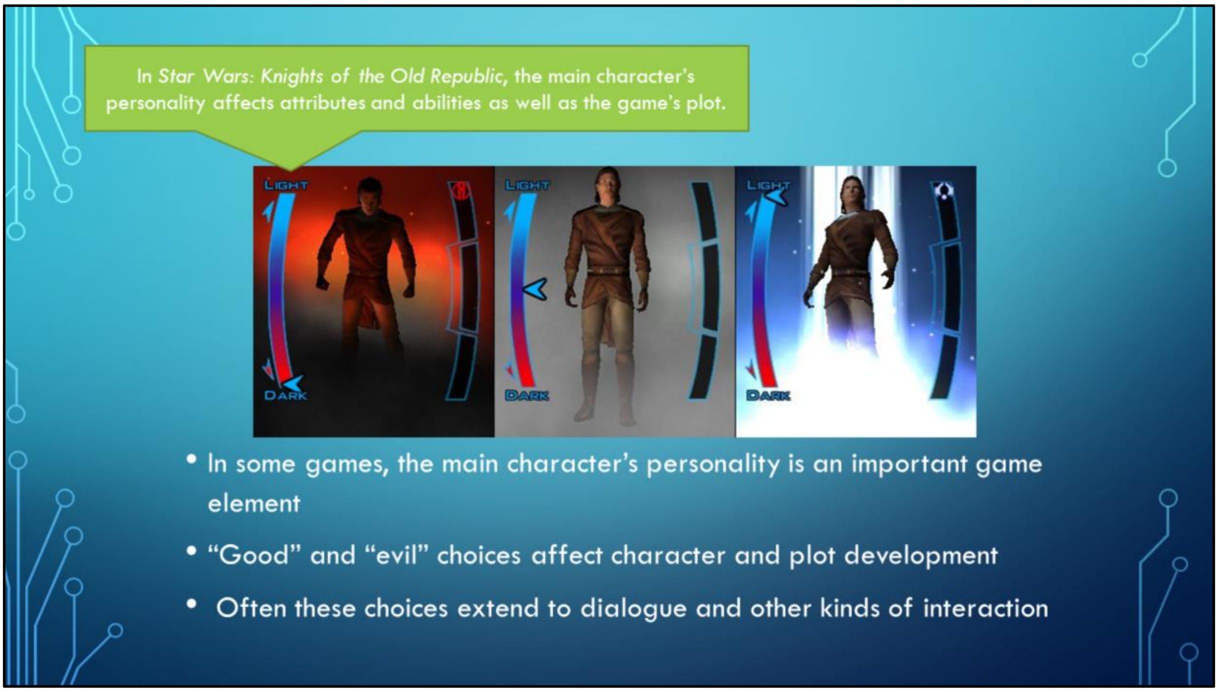


- Dialogue options can characterize the player’s character as well
- Express emotions (or not) and develop personality
- Other characters respond in kind

Kaidan: Commander. I'm glad to see you're okay. Losing Jenkins was hard on the crew. And I'm glad we didn't lose you, too.

Dialogue choices in games like *Mass Effect* allow players to define the main character’s personality.

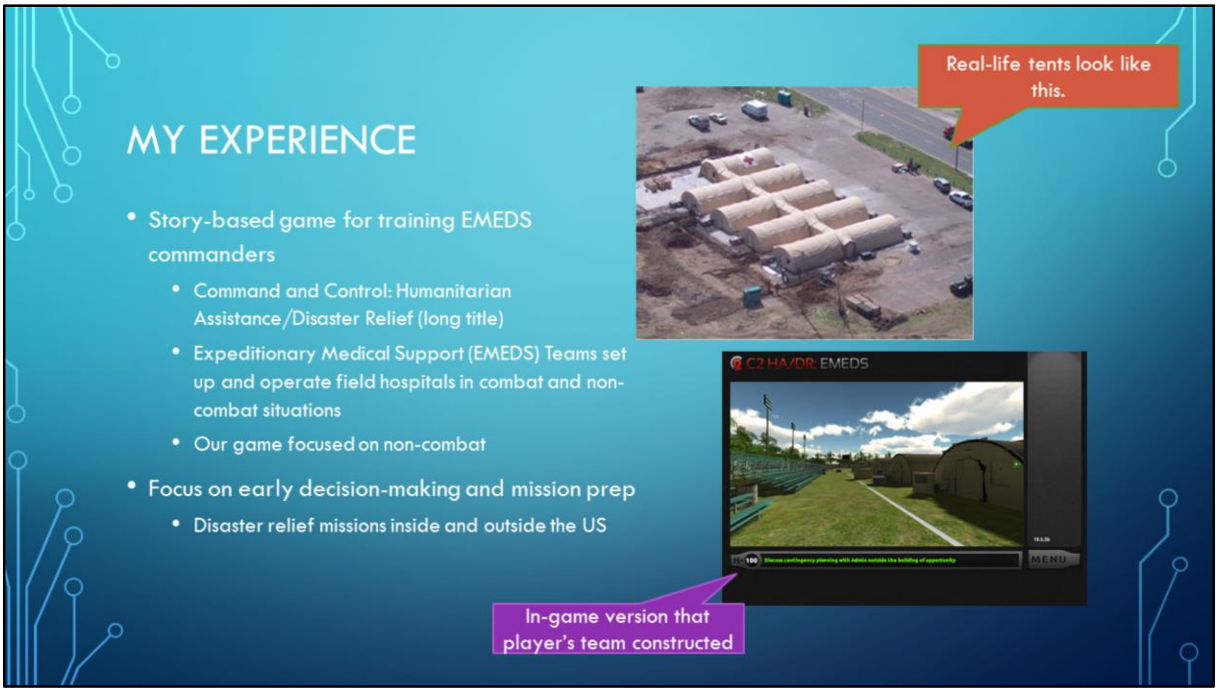
Dialogue trees can be used to develop the player’s character as well. In many of the more recently produced RPGs, the players’ dialogue choices allow them to express emotion and personality--for instance, they can choose to be diplomatic, aggressive, play dumb, or be sassy or sarcastic. Each of these choices opens a corresponding branch of dialogue in which the other character or characters in the conversation respond to the player’s choice.



In *Star Wars: Knights of the Old Republic*, the main character's personality affects attributes and abilities as well as the game's plot.

- In some games, the main character's personality is an important game element
- "Good" and "evil" choices affect character and plot development
- Often these choices extend to dialogue and other kinds of interaction

Often, these choices affect other elements of the game. In games that have an ethics system, such as Star Wars Knights of the Old Republic, player actions, including their dialogue choices, add good or evil points to their morality score. As players trend toward either extreme, their characters develop corresponding attributes. Character's alignments may impact important events in the game's plot, opening up some quests and events while closing off others.



MY EXPERIENCE

- Story-based game for training EMEDS commanders
  - Command and Control: Humanitarian Assistance/Disaster Relief (long title)
  - Expeditionary Medical Support (EMEDS) Teams set up and operate field hospitals in combat and non-combat situations
  - Our game focused on non-combat
- Focus on early decision-making and mission prep
  - Disaster relief missions inside and outside the US

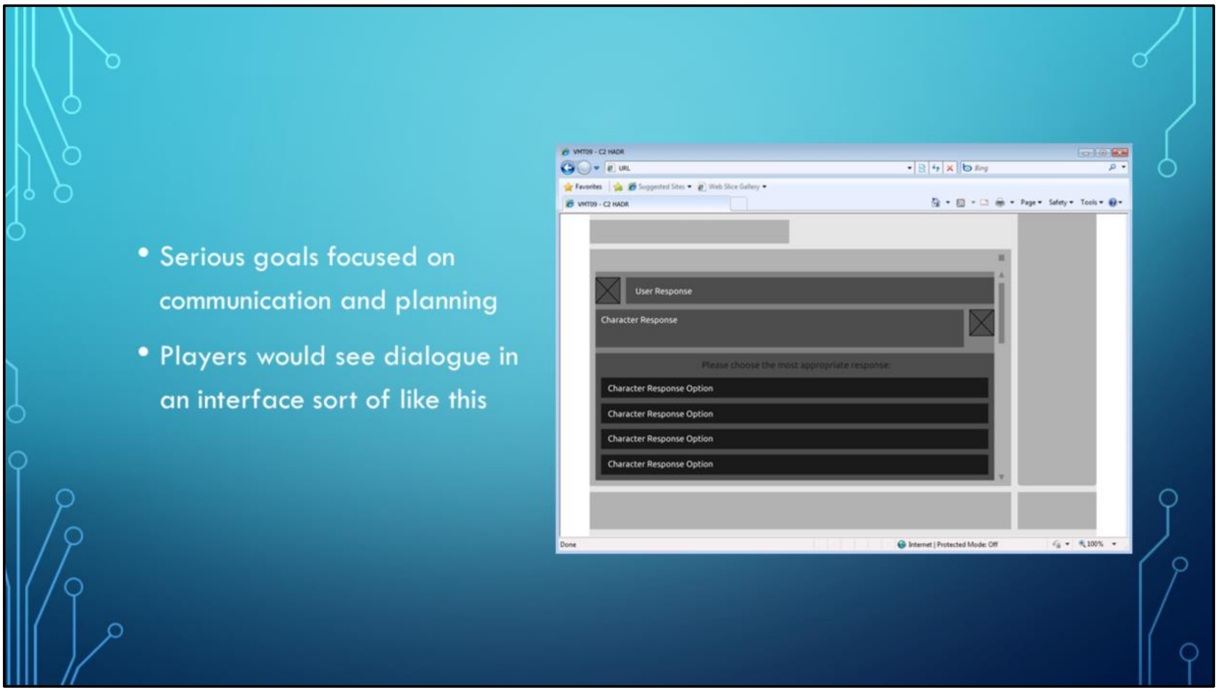
Real-life tents look like this.

In-game version that player's team constructed

C2 HA/DR: EMEDS
100
Discuss contingency planning with Admin outside the building of opportunity
MENU

At a past job, I helped to develop the script for a story-based game meant to aid in training Air Force commanders assigned to expeditionary medical support teams. EMEDS are specially-trained personnel packages ready to deploy to war zones and disaster areas in the continental U.S. and all over the world to set up field hospitals. It's kind of like M*A*S*H.

Our game focused on the early decision-making portion of a mission during which commanders need to gather information, communicate with important stakeholders, and get ready to send the team out. Players engaged in up to four scenarios involving disaster events such as massive earthquakes and hurricanes that strike locations inside and outside of the U.S. Although players made and were scored on several important decisions throughout each scenario, they weren't allowed to fail the game. Instead, they progressed linearly to the ending.

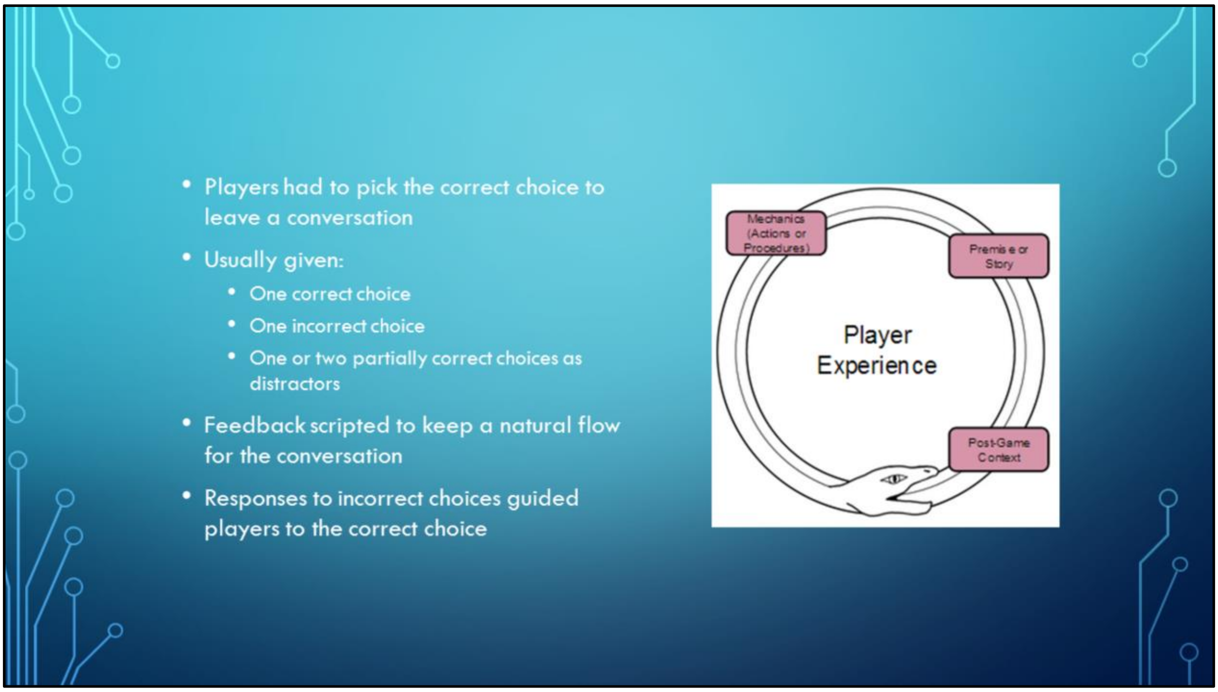


- Serious goals focused on communication and planning
- Players would see dialogue in an interface sort of like this

VMT09 - C2 HADR
URL
Bing
Favorites
Suggested Sites
Web Slice Gallery
VMT09 - C2 HADR
Page
Safety
Tools
User Response
Character Response
Please choose the most appropriate response:
Character Response Option
Character Response Option
Character Response Option
Character Response Option
Done
Internet | Protected Mode: Off
100%

Because some of the serious goals behind the game focused on communication and planning, all of the decision points appeared in dialogue trees. Players would see these conversations in an interface shaped like this (sorry, I don't have any actual screenshots available).

Players followed the story and chose how to respond to characters they spoke with at different points..



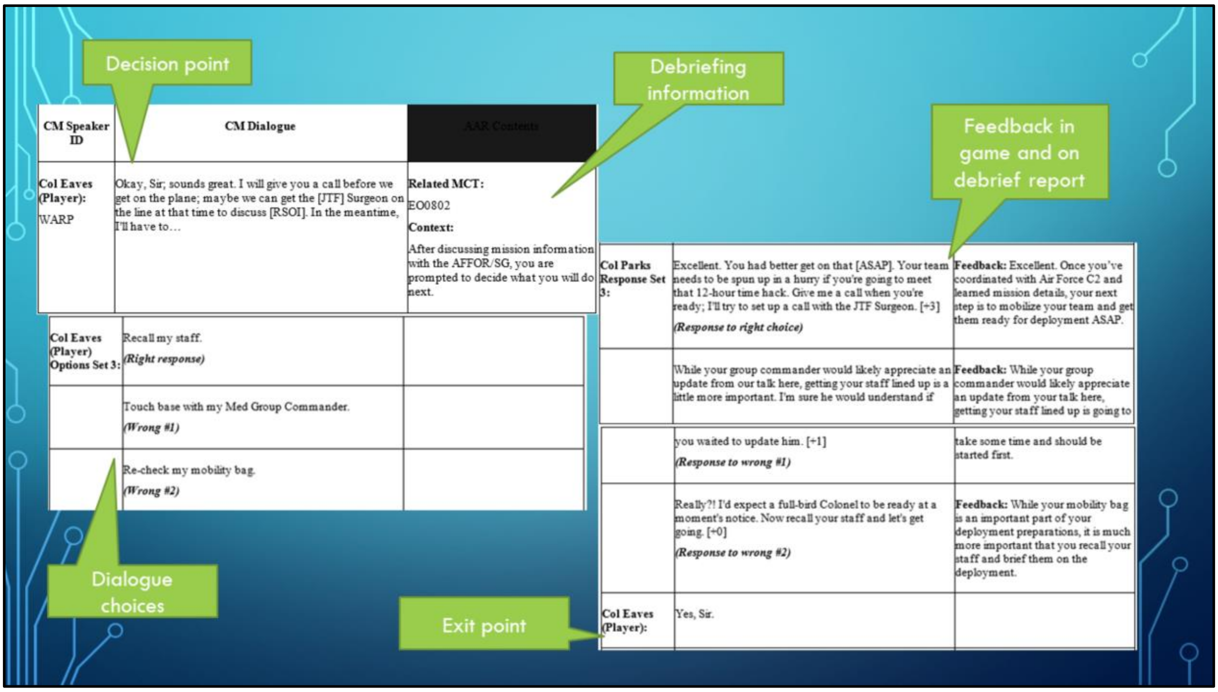
- Players had to pick the correct choice to leave a conversation
- Usually given:
  - One correct choice
  - One incorrect choice
  - One or two partially correct choices as distractors
- Feedback scripted to keep a natural flow for the conversation
- Responses to incorrect choices guided players to the correct choice

Mechanics (Actions or Procedures)
Premise or Story
Player Experience
Post-Game Context

Once players entered a conversation, they were stuck there until they picked the correct choice. Players were usually given one correct choice, one entirely incorrect choice, and a few partially correct choices to act as distractors. Players were only scored on their first answer to each dialogue prompt. If they got it wrong, they had to choose again until they got the right choice.

Feedback was scripted for each choice so that the conversation still flowed naturally. While the correct choice led to the next line in the optimal conversation, incorrect choices showed the other character’s reaction to the player’s choice. We scripted the incorrect choice feedback to guide players toward the right choice so that they didn’t get stuck randomly picking things.

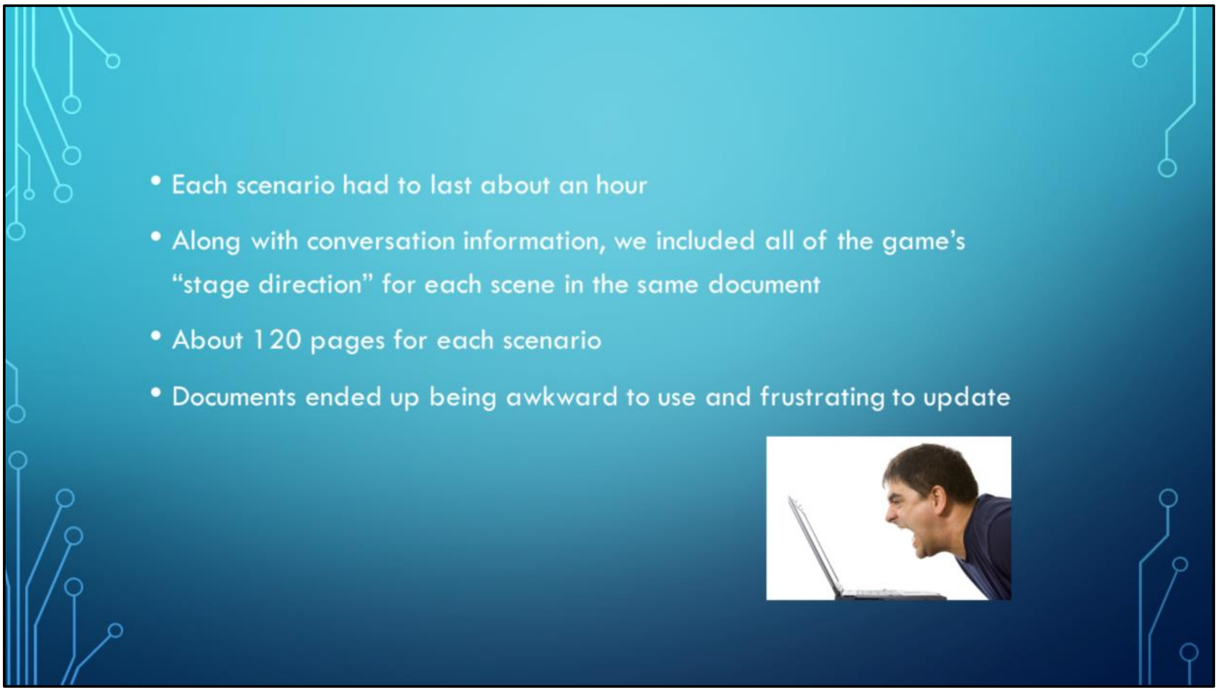
We tried to make the conversations sound natural. An obviously wrong response might be met with surprise or annoyance if a player was talking to a higher ranking character, and confusion if a player was talking to a lower ranking character. For the system to work, we had to assume that the other characters in the game knew more about what should be happening than the player. Otherwise, we couldn’t maintain the story and still have only one real path to get through. The other characters (and game mechanics) prevented the player from screwing up the mission.


Decision point
Debriefing information
Feedback in game and on debrief report
Dialogue choices
Exit point

CM Speaker ID	CM Dialogue	AAR Contents
Col Eaves (Player): WARP	Okay, Sir; sounds great. I will give you a call before we get on the plane; maybe we can get the [JTF] Surgeon on the line at that time to discuss [RSOI]. In the meantime, I'll have to…	**Related MCT:** EO0802 **Context:** After discussing mission information with the AFFOR/SG, you are prompted to decide what you will do next.
Col Eaves (Player) Options Set 3:	Recall my staff. ***(Right response)***	
	Touch base with my Med Group Commander. ***(Wrong #1)***	
	Re-check my mobility bag. ***(Wrong #2)***	
Col Parks Response Set 3:	Excellent. You had better get on that [ASAP]. Your team needs to be spun up in a hurry if you're going to meet that 12-hour time hack. Give me a call when you're ready; I'll try to set up a call with the JTF Surgeon. [+3] ***(Response to right choice)***	**Feedback:** Excellent. Once you've coordinated with Air Force C2 and learned mission details, your next step is to mobilize your team and get them ready for deployment ASAP.
	While your group commander would likely appreciate an update from our talk here, getting your staff lined up is a little more important. I'm sure he would understand if you waited to update him. [+1] ***(Response to wrong #1)***	**Feedback:** While your group commander would likely appreciate an update from your talk here, getting your staff lined up is going to take some time and should be started first.
	Really?! I'd expect a full-bird Colonel to be ready at a moment's notice. Now recall your staff and let's get going. [+0] ***(Response to wrong #2)***	**Feedback:** While your mobility bag is an important part of your deployment preparations, it is much more important that you recall your staff and brief them on the deployment.
Col Eaves (Player):	Yes, Sir.	

We organized all of the dialogue into tables in a Word document. Each conversation had its own table indicating who the speakers were, what the correct and incorrect answers were, what the incorrect feedback was, and which part of the conversation the player should loop back to after an incorrect choice.

At the end of the game, players viewed a debriefing report that summarized their choices, explained how each decision point mapped to a mission critical task (MCT), and explained how well the player's choices worked or didn't work in the context of the scenario. We included information for the debriefing report in each conversation table as well.



- Each scenario had to last about an hour
- Along with conversation information, we included all of the game's "stage direction" for each scene in the same document
- About 120 pages for each scenario
- Documents ended up being awkward to use and frustrating to update

Each scenario needed to take about an hour to complete, which required a lot of dialogue. For reference, scripts for feature-length films run about 120 pages. In our game documents, we included the conversation table along with all of the other descriptive and functional information for each scene of the game. Things like lists of interactive objects in the 3D space, what areas the player could go to, and what player actions would trigger particular events. We created essentially screenplays for the game developers to set the stage and program the dialogue trees for each scene.

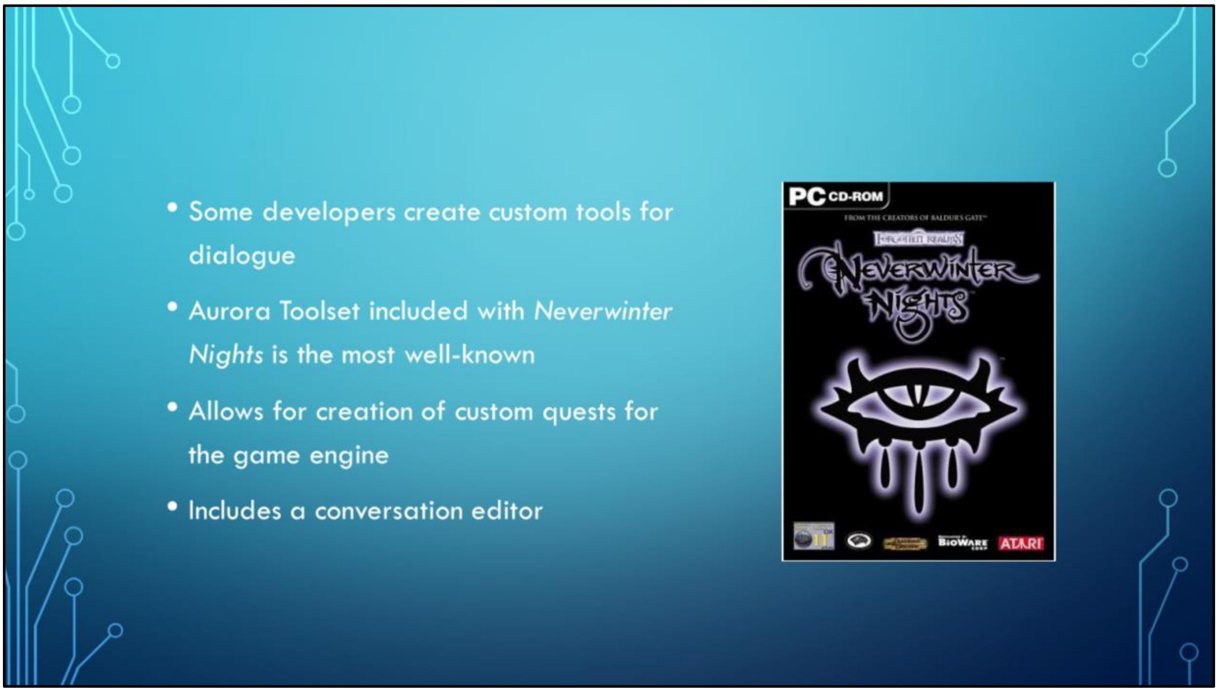
As you might imagine, these documents ended up being long and somewhat confusing, although using headings and Outline view in Word helped to navigate them somewhat. The scripts worked okay for our needs, but were pretty awkward to use and awful to update. You should probably try a different strategy if you're working on a long game or a game that involves a large interactive story--especially if your game's story has multiple branches or lots of dialogue options.

THERE ARE BETTER OPTIONS…

- Game writer Wendy Despain recommends Excel for simple databases
- Some great features:
  - Automatic line numbering—helps with tracking lines for developer use and during QA testing
  - Search and sorts help with edits
  - Spellcheck—isn't always useful, but can be with updated dictionaries
  - Text can be imported from Excel into XML files, eliminating copy/paste

In the book Professional Techniques for Video Game Writing, Wendy Despain describes the benefits of using Excel to create simple databases for dialogue. Excel provides several useful features like automatic line numbering to keep things organized, various kinds of searches and sorts, and spellcheck. Spellcheck might get in the way of creating authentic dialogue, since people tend to speak using incorrect grammar. It may not recognize elisions or colloquialisms, and it's usually pretty bad at recognizing technical terms unless you add them to the dictionary.

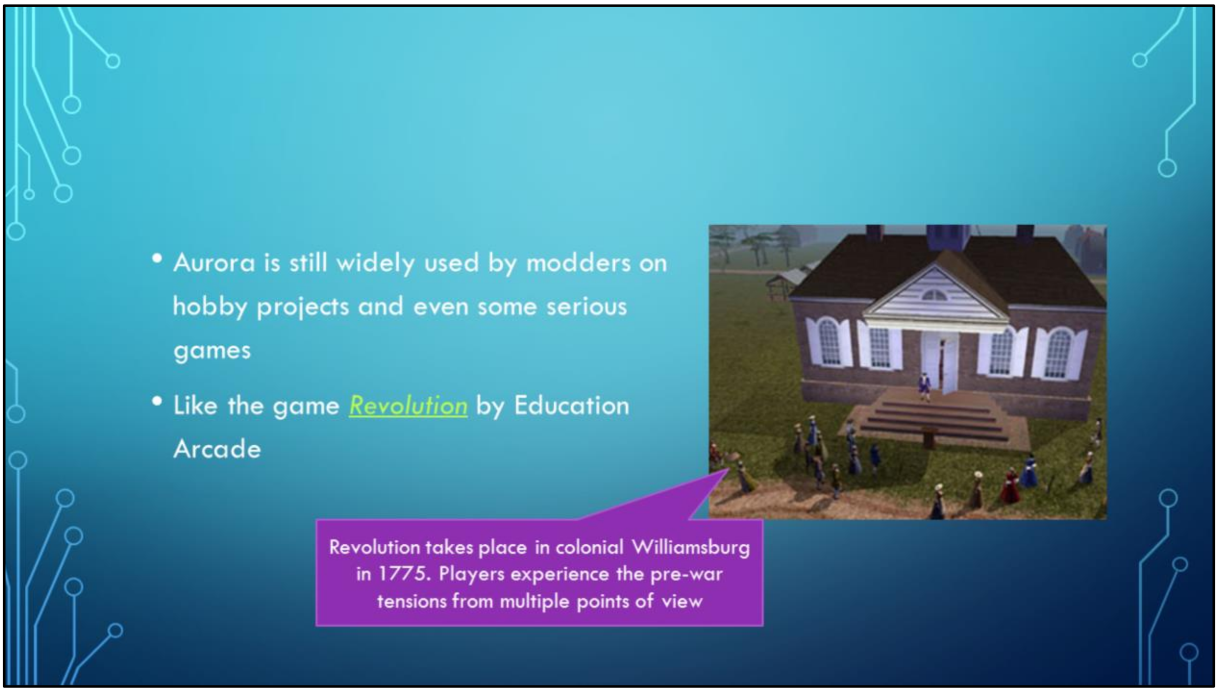
Data from Excel files can be imported into XML files, making it much easier for developers to create the database used by the actual game. In our process, developers had to manually copy and paste each line of dialogue from the Word script to the right XML file. Not only was this tedious, it created a high risk of errors in the game text. (And more work for QA testers and developers down the line.)



- Some developers create custom tools for dialogue
- Aurora Toolset included with *Neverwinter Nights* is the most well-known
- Allows for creation of custom quests for the game engine
- Includes a conversation editor

Some developers create custom tools to help with creating and programming dialogue. The scenario building kit for CyberCEIGE includes a tool for scripting character bubble text and connecting it to game events and conditions.

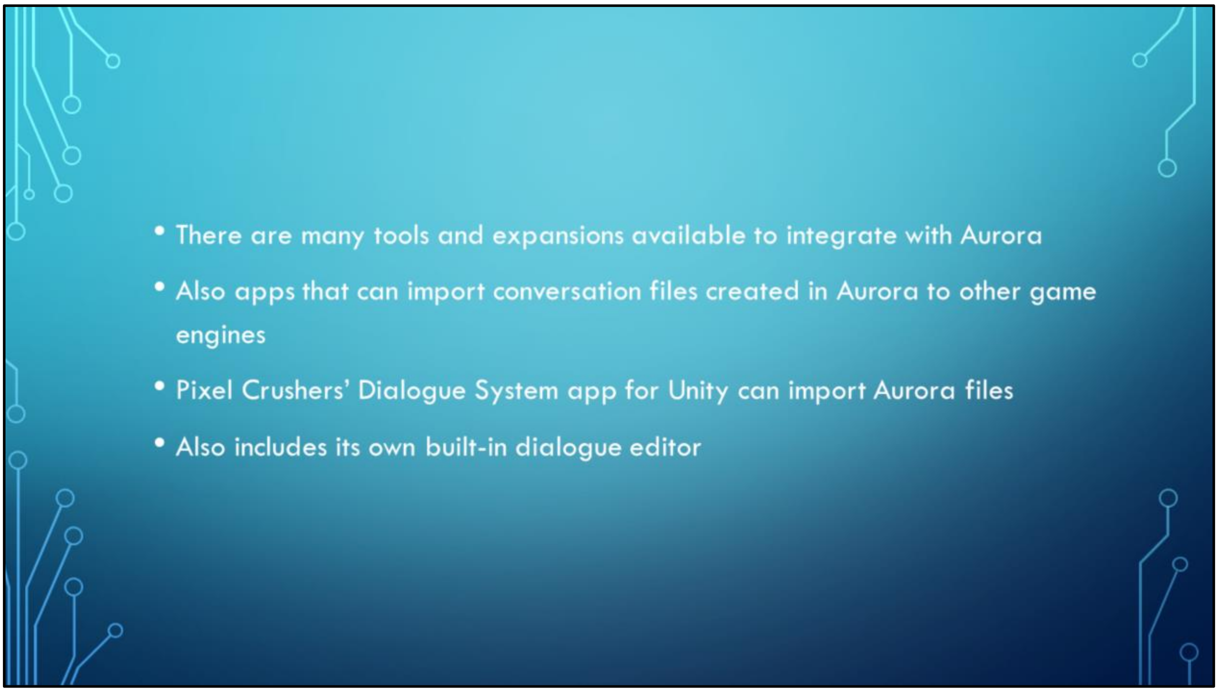
The most well-known dialogue tool is still probably the Aurora Toolset included with the computer RPG game Neverwinter Nights developed by BioWare. Aurora allows users to create new quests playable in the Neverwinter Nights game engine. Part of this includes creating dialogue trees in the tool's conversation editor.



- Aurora is still widely used by modders on hobby projects and even some serious games
- Like the game *Revolution* by Education Arcade

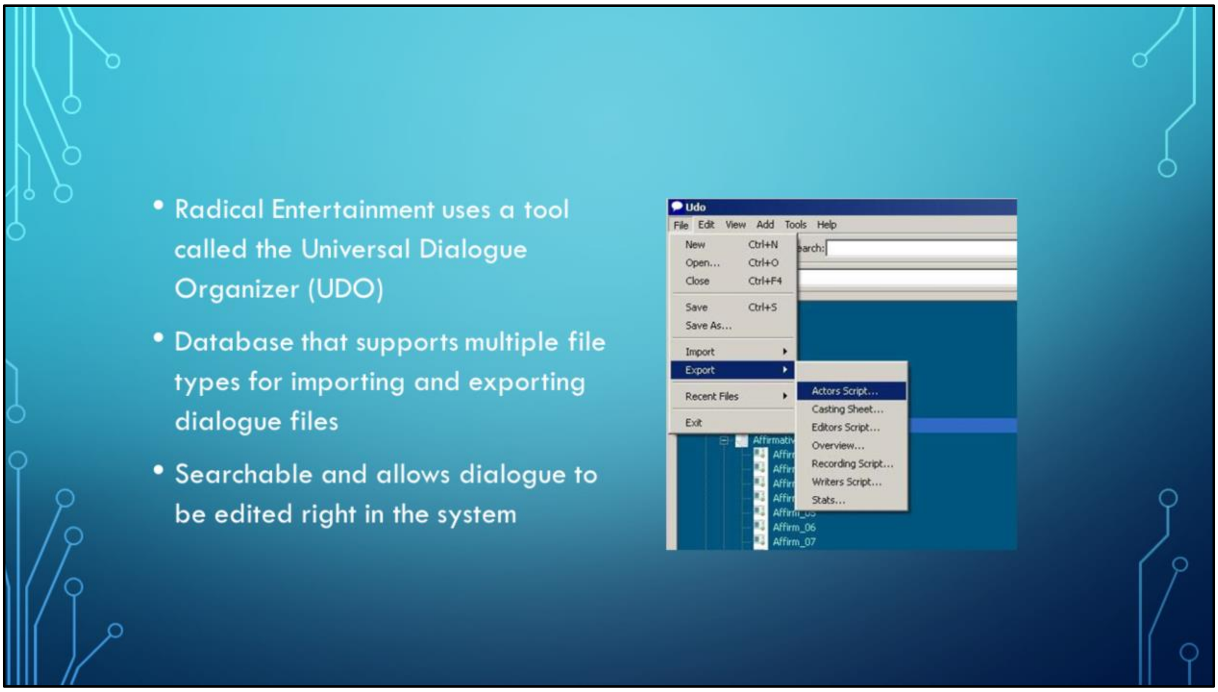
Revolution takes place in colonial Williamsburg in 1775. Players experience the pre-war tensions from multiple points of view

Although BioWare no longer supports Aurora, it’s still widely used by modders on hobby projects and even some serious games. Developers from the Education Arcade used Aurora to create a mod showing life in colonial Williamsburg in 1775. Players can play seven different characters, experiencing the pre-revolutionary war tensions from a variety of viewpoints.



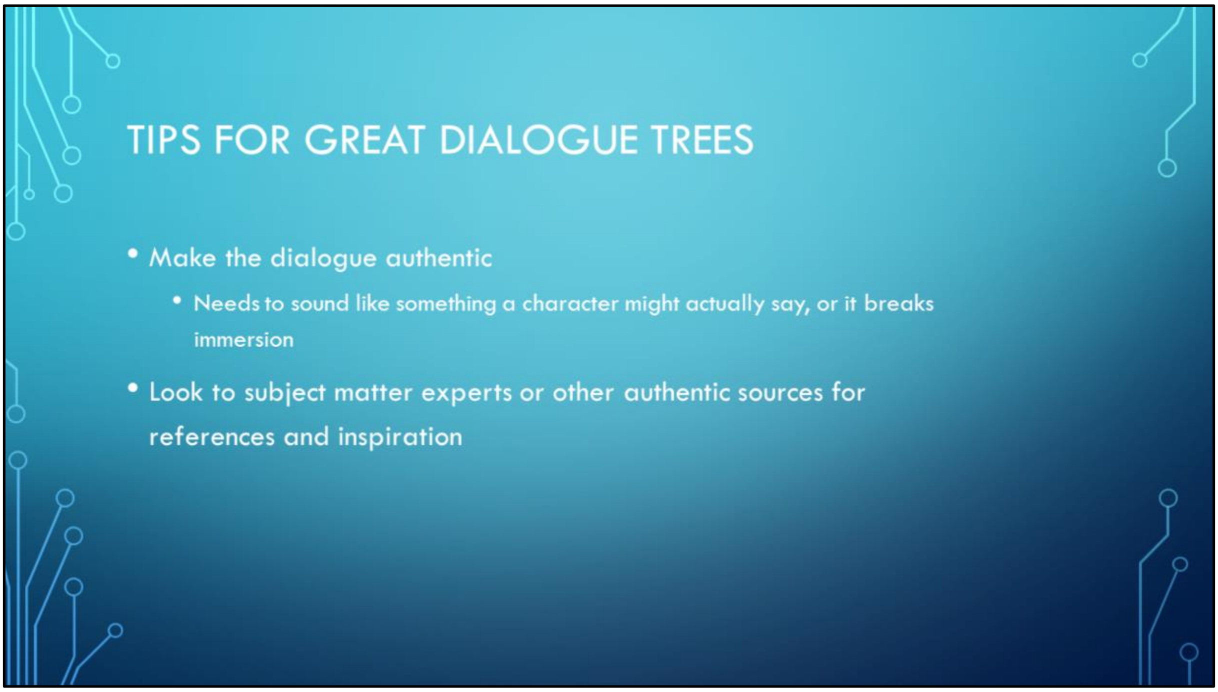
- There are many tools and expansions available to integrate with Aurora
- Also apps that can import conversation files created in Aurora to other game engines
- Pixel Crushers' Dialogue System app for Unity can import Aurora files
- Also includes its own built-in dialogue editor

There are many tools and expansions available to integrate with Aurora. There are also apps that allow Conversation files from Aurora to be imported into other engines for use in other kinds of game builds. One of these is Pixel Crushers' Dialogue System app for Unity, which allows for Aurora conversation data to be played in Unity games. The app also includes its own built-in dialogue editor.



- Radical Entertainment uses a tool called the Universal Dialogue Organizer (UDO)
- Database that supports multiple file types for importing and exporting dialogue files
- Searchable and allows dialogue to be edited right in the system

Another dialogue tool is the Universal Dialogue Organizer used by Radical Entertainment. UDO is a robust database for managing dialogue throughout the development cycle, from writing, through edits, through recording, integration into the game engine, and QA testing. UDO imports data from a variety of sources, makes it searchable, and provides multiple ways of exporting it. It even allows for dialogue to be edited through the tool, aiding in QA work and last minute script changes.

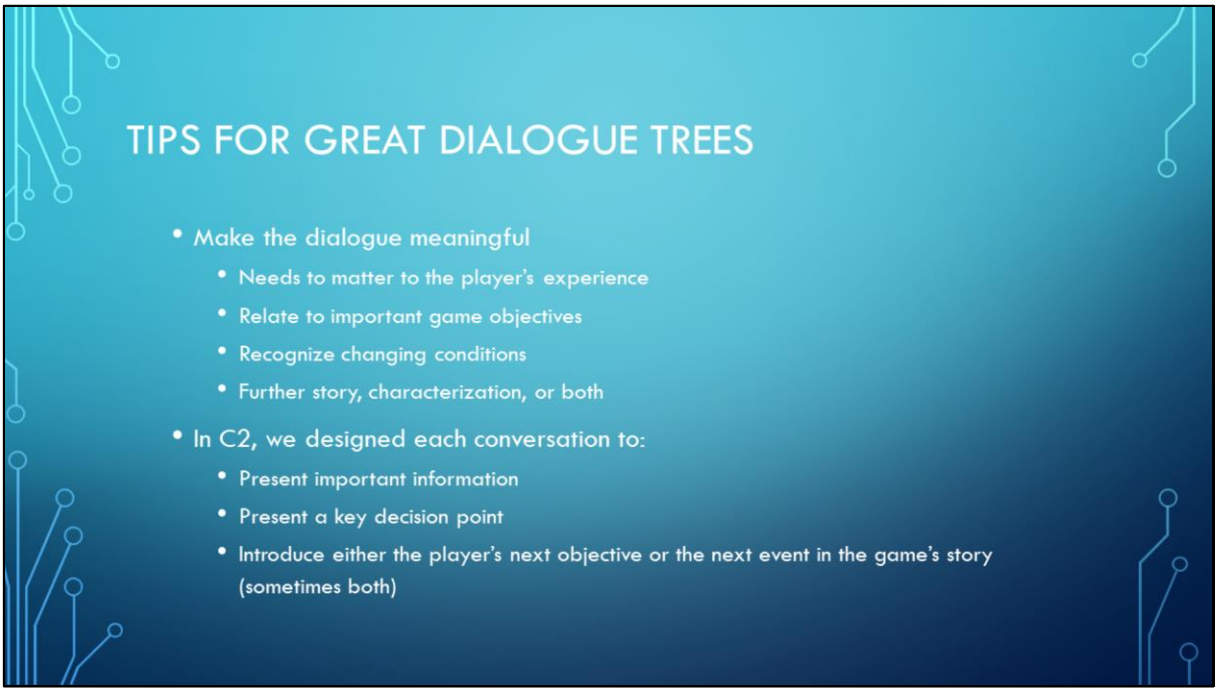


TIPS FOR GREAT DIALOGUE TREES

- Make the dialogue authentic
  - Needs to sound like something a character might actually say, or it breaks immersion
- Look to subject matter experts or other authentic sources for references and inspiration

Make the dialogue seem authentic. It needs to sound like something a character might actually say, or it else it can break the player’s immersion.

For C2, we walked through each scenario with our lead SME and asked him to give us examples of what characters might say in the conversations. We were able to use that as a basis to create the rest of the script.

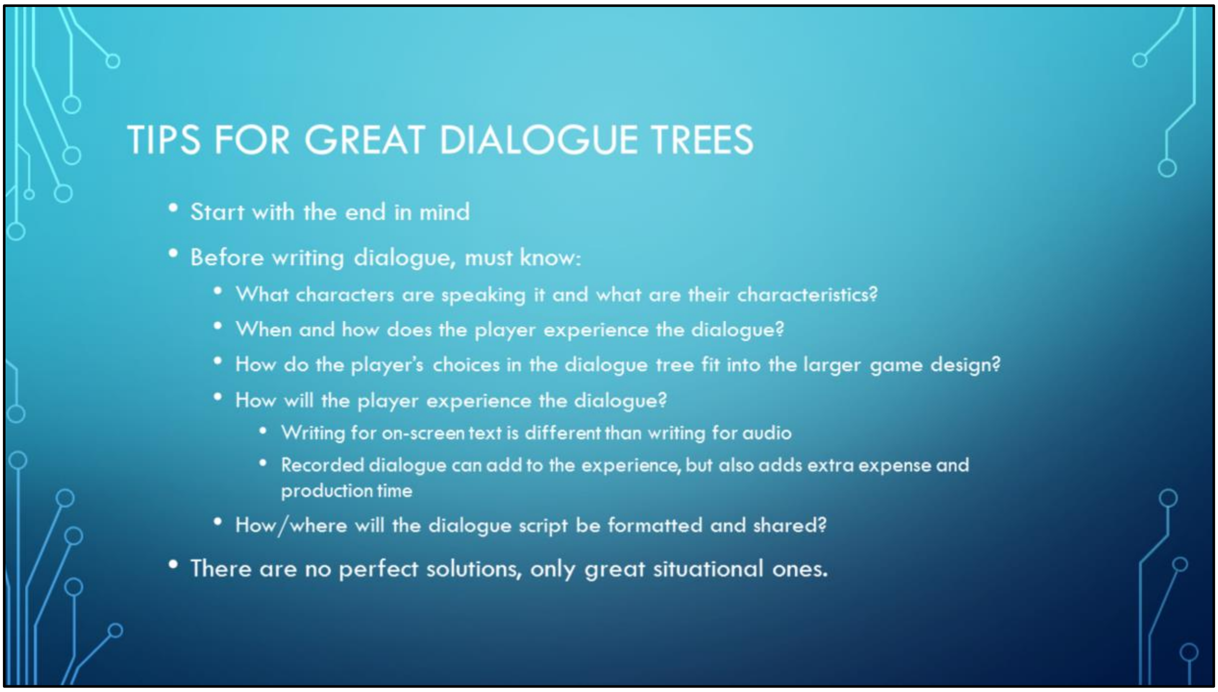


TIPS FOR GREAT DIALOGUE TREES

- Make the dialogue meaningful
  - Needs to matter to the player's experience
  - Relate to important game objectives
  - Recognize changing conditions
  - Further story, characterization, or both
- In C2, we designed each conversation to:
  - Present important information
  - Present a key decision point
  - Introduce either the player's next objective or the next event in the game's story (sometimes both)

Make the dialogue meaningful. The dialogue needs to matter in some way to the player's experience. It needs to relate to important game objectives, recognize changing conditions in the game, and serve to further the story, further characterization, or both.

For C2, we planned conversations so that each game objective involved speaking to someone. Each conversation presented important information, a key decision point, and then introduced the player's next objective or the next event in the game. This structure helped to create a flow that kept the player moving through the story.



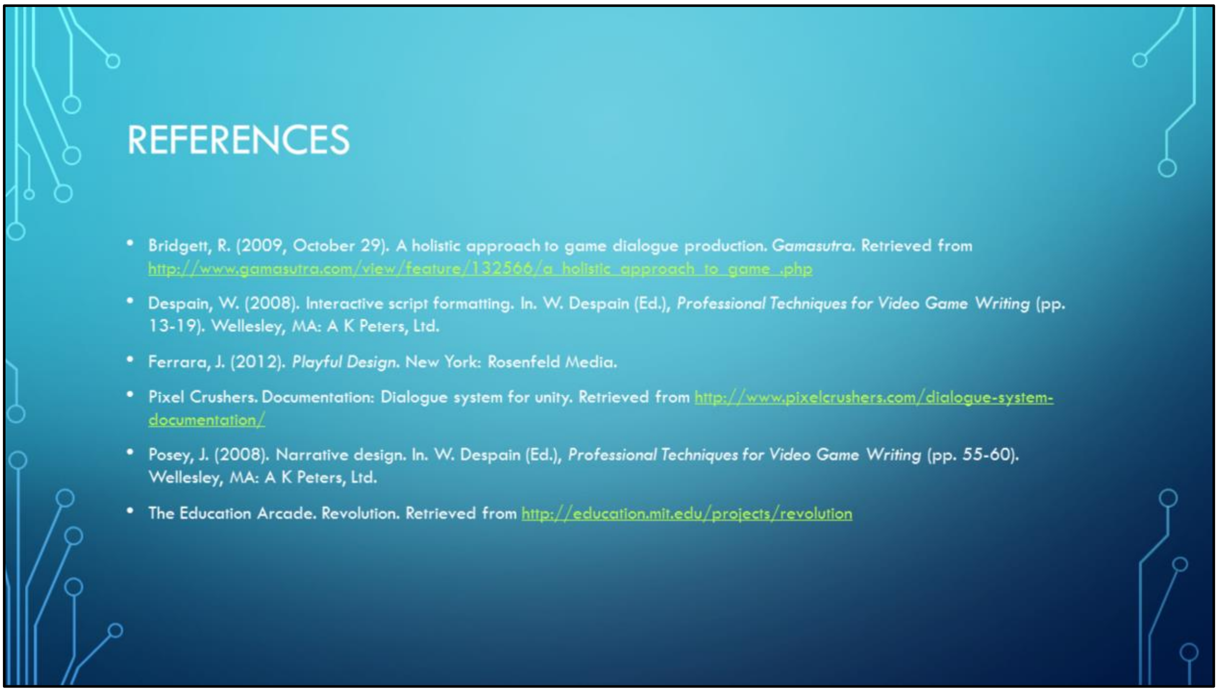
TIPS FOR GREAT DIALOGUE TREES

- Start with the end in mind
- Before writing dialogue, must know:
  - What characters are speaking it and what are their characteristics?
  - When and how does the player experience the dialogue?
  - How do the player's choices in the dialogue tree fit into the larger game design?
  - How will the player experience the dialogue?
    - Writing for on-screen text is different than writing for audio
    - Recorded dialogue can add to the experience, but also adds extra expense and production time
  - How/where will the dialogue script be formatted and shared?
- There are no perfect solutions, only great situational ones.

Start with the end in mind. You need to know all of the requirements for the dialogue before scripting it. Things like:
What characters are speaking it, and what are their characteristics?
When does the player encounter the dialogue?
How does the player's choices in the dialogue tree and the subsequent responses fit into the larger game design?
How will players experience the dialogue? Read it on screen, or hear audio clips? Writing for audio is a bit different than writing on-screen text. You generally to keep sentences shorter, or at least work in clear breaks for the voice actor to pause between breaths. Actors may want to modify scripts or go off script entirely at times, and scripts will need to be updated to reflect the changes. Recording audio adds extra production time and expense to the project. The audio files will also significantly add to the file size of the finished game, and create more elements to test. Audio can be a great addition to a game experience when it's done well, but doing it well takes significant planning and effort.

You should also consider how the dialogue script will be formatted and how it will be distributed among the team members. Each role on the team will need to use the script in different ways. For example, the writing team will need to be able to share the same files and easily make edits to them. Developers need to see all of the events connected to the dialogue so they can program the lines to display at the proper time. Voice actors don’t need to see any of that; generally, all they need is the lines their characters are speaking. They may need some additional notes for direction and quick description of the context for the lines they are recording to make sure they read with the right emotion for the scene.

There are no one perfect solutions, only great situational ones. If you anticipate the needs and preferences of all of the people involved in the production, and plan with the end goals in mind, it will lead to better results.



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