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# Schrödinger's Cat in a Mercedes

Making Games with  
Non-linear Narrative

**CDPROJEKT** RED





What exactly is non-linearity?



# Non-linearity definition

- Non-linear storyline
- Non-linear narration
- Non-linear gameplay



The background features a dark blue and green abstract pattern, possibly representing a textured surface or a liquid medium. Scattered throughout are numerous small, glowing red and orange particles, some of which appear to be in motion, creating a sense of depth and dynamic energy.

OK, but why bother?



# Non-linearity why bother?

- Choices & consequences enforce immersion with game world.
- Players can shape stories and protagonists in their own way.



# Non-linearity why bother?

- It allows to tell complex and interesting stories.
- Non-linearity enforces replayability of the game



# Choices and Consequences

The background of the slide is a dark, moody gradient of blue and teal. It is decorated with numerous small, red, petal-like or leaf-like shapes that appear to be falling or floating, creating a sense of movement and depth. The overall aesthetic is artistic and somewhat somber.



Choices & Consequences

# Ambiguity

Choices shouldn't be obviously „right” or „wrong”, in order to create dilemmas for players.



Choices & Consequences

# Unpredictability

- Important consequences should be delayed in time, so the players can't predict them.
- Delayed consequences make the game more consistent, in contrast to having series of disconnected scenes in game.



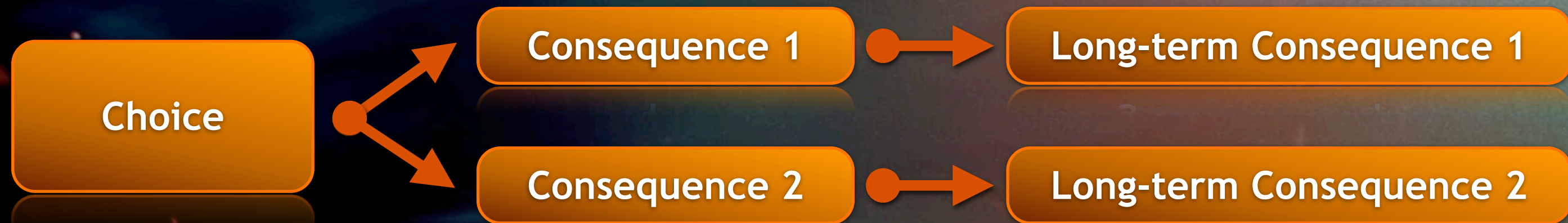


# Choices & Consequences **Weight**

Consequences should be significant, so the players can feel the weight of their choices.



# Choices & Consequences



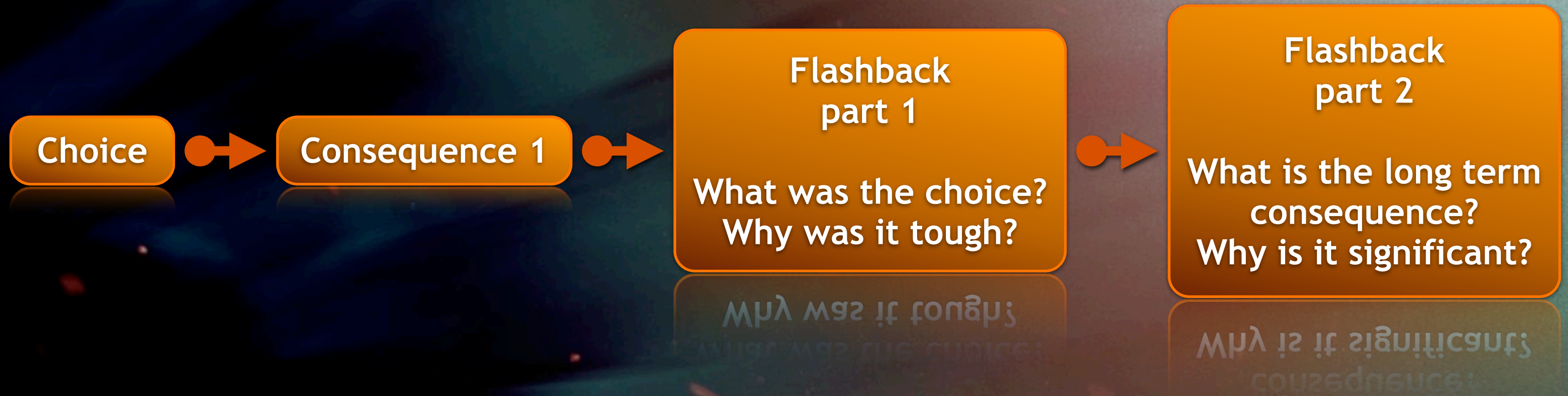




What if players forget, what choice  
led to a certain consequence?



# Flashbacks






# Examples of flashbacks







# Growing your sampling into a tree

## Branching storylines



# Branching storyline

- Branching storyline is a game structure, in which player choices open some quest lines and close others.

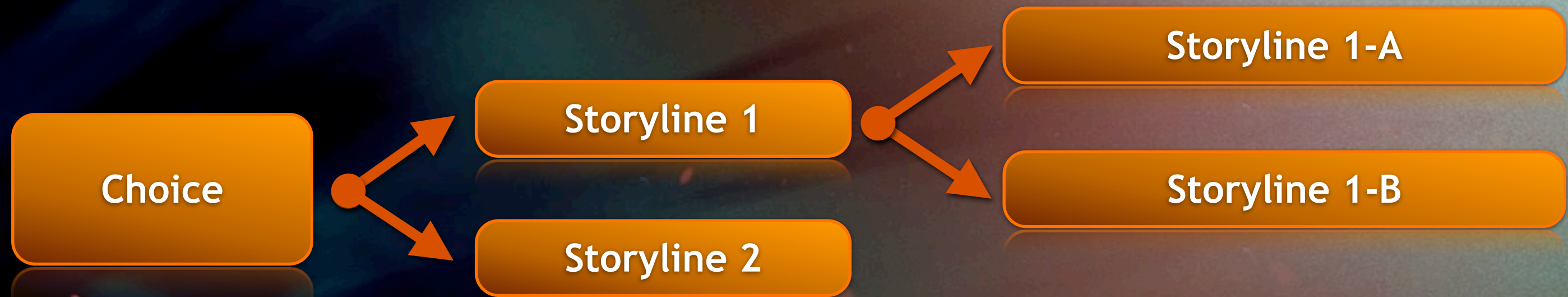


# Examples of branching storyline





# Branching game structure





The background is a photograph of a forest floor. On the left, a large, dark tree trunk is visible, with its bark showing some texture. The ground is covered with fallen leaves in various shades of brown, orange, and red. The lighting is soft, creating a moody atmosphere. The text "What if your tree becomes a thicket?" is overlaid in the center in a white, sans-serif font.

What if your tree becomes a thicket?



# Branching storyline issues

- Each alternative storyline makes game grow in width, instead of length.
- Each alternative quest line requires time to implement.
- As game grows in width, it's getting more difficult to close storylines.



# Trimming the thicket - control nodes





# Schrödinger's cat issue



# Control node issues

- After the story reaches a control point, it may occur that an NPC can be both dead or alive, depending on our previous choices.
- „Schrödinger's cat issue” applies also to states of the world, etc.
- To determine the state of a „Schrödinger's cat” we need to check, what is its status.



# Facts Database

- Facts database is a simple virtual database of variables.
- Each time player makes a decision during an important choice moment, we add a variable to the facts database.
- When we need to determine if a „Schrödinger's cat” is dead or alive, we simply check the variables in Facts Database.
- Access to Facts Database is available from many different tools





Schrödinger's cat gets  
into a Mercedes



# What do call a „Mercedes”?

- „Mercedes” is a structure that consists of separate and independent storylines.
- To progress further in the main plot, all storylines must be completed.



# „Mercedes” game structure





# Basic Mercedes

- Basic Mercedes must consist of at least two storylines (although all-time favorite is three).
- Basic Mercedes tasks players with finding physical objects.





# Basic Mercedes - pitfalls and traps

- It's impossible to use same NPCs in parallel storylines.
- Balancing gameplay is difficult, because player has freedom of choosing storylines.
- Players may forget what is the main plot.
- It's difficult to implement connections between storylines.





Wait - it gets better.



# Complex Mercedes

- Complex Mercedes requires gathering a number of informations, that combined tell the player full story.
- Each part of information must be separate and include only partial solution.
- Example: Find out who is the killer, after gathering clues in three places.



# Complex Mercedes - pitfalls and traps

- Designing a number of separate informations that uncover the solution only when all gathered is very difficult.
- After it's designed, complex Mercedes is not easy to change - cutting off or adding new storylines complicates the Mercedes logic.



# Non-linear narration



# Non-linear narration - replacers

- Replacer is a playable character, that is not a main character of the game.
- Gameplay as a replacer is periodical and limited - it's not equivalent of playing as a main character.



# Replacers - examples





# Replacers - examples





# Replacers - benefits

- Replacer allows us to show the plot from a different perspective, thus it gains more depth.
- We can show events, that main character couldn't participate in, in an interactive way.
- It builds a bond between player and replacer.
- It's refreshing gameplay-wise.



# Replacers - issues

- Replacers can break immersion with main character and game world.
- Replacers can be used only on limited spaces, so the player can't escape.
- To make replacers interesting, one must add a lot of features.



## Non-linear narration - reverse chronology

Reverse chronology is a narrative tool, in which we show main character at a breaking point of plot, and then the player plays events that led to this moment.



# Reverse chronology examples





# Reverse chronology examples





# Reverse chronology - benefits

- Reverse chronology effectively builds suspense.
- It picks player interest quickly.
- It's a comfortable tool of telling complicated stories - we can divide it in parts.



# Reverse chronology - issues

- It's easy to confuse players with this method - the player must be focused to catch up with the story.
- Time paradox - in an RPG we can't foresee what items the players will gather, what skills he'll unlock, etc.



# Summary



# Summary - non-linearity costs

- Non-linear story with nonlinear narrative is hard to design and even harder to implement and debug.
- It's expensive and takes long in production.
- Costs are high, but we believe that the results are worth it.



# Summary - non-linearity basics

- Non-linearities should be noticeable for players.
- A way to make them so, is to make them visible and significant.
- To make a consequence visible, we remind how was it connected to the choice.



# Summary - branching game structures

- A storyline may branch into mutually excluding storylines.
- Each exclusive storyline makes game grow in width.
- A “mercedes” is a branching structure, which requires player to finish multiple story branches in order to progress.
- A “mercedes” makes game grow in length.



# Summary - non-linear narration

- Non-linear stories can be told using non-linear narration techniques, such as replacers or reverse chronology.
- Nonlinear narration techniques help to keep players attention.
- Nonlinear narration techniques add depth to the plot, and they present it in more interesting way.



# Questions & Answers







Thank you!