

Slide 1



HCNI@CHI PLAY 2025  
Pittsburgh, Pennsylvania

FIRST INTERDISCIPLINARY WORKSHOP  
ON HUMAN-COMPUTER-NARRATIVE  
INTERACTIONS

WELCOME EVERYONE!

Slide 2



WHO ARE WE?

 <p><b>Geneva M. Smith</b></p> <ul style="list-style-type: none"><li>• Software Engineering</li><li>• Game Design</li><li>• Affective Computing</li></ul>	 <p><b>Christian Roth</b></p> <ul style="list-style-type: none"><li>• Media Psychology</li><li>• Interactive Narrative Design</li><li>• Applied Game Design</li></ul>
 <p><b>Mark Hancock</b></p> <ul style="list-style-type: none"><li>• Interaction Methods for Games</li><li>• Physical Interaction (XR, multi-touch)</li><li>• Human-AI Interaction</li></ul>	 <p><b>Lennart Nacke</b></p> <ul style="list-style-type: none"><li>• Games User Research</li><li>• Generative AI</li><li>• Interaction Design</li></ul>

HCNI@CHI PLAY 2025 13-Oct-25 2

Slide 3

## HCNI WORKSHOP OBJECTIVES

1. Develop a working list (e.g., collaborative document) of story structures and storytelling traditions that support audience/user interactions with digital systems.
2. Identify HCI concepts that support audience/user interactions with those structures in digital systems.
3. Identify the next steps for the community to further develop these contributions and identifying related issues for investigation.

HCNI@CHI PLAY 2025 13-Oct-25 3

Slide 4

## WORKSHOP AGENDA

Time	Activity	Duration
9–9:45AM	Activity I: Welcome & Community Building	45 minutes
9:45–10:45AM	Activity II: Storytelling & Interactivity	60 minutes
10:45–11AM	Break!	15 minutes
11AM–12PM	Activity III Part 1: Let's Jam!	60 minutes
12–1PM	Lunch!	60 minutes
1–2PM	Activity III Part 1: Let's Jam! Continued	60 minutes
2–2:45PM	Activity III Part 2: Share Your Creations!	45 minutes
2:45–3PM	Break!	15 minutes
3–3:45PM	Activity III Part 2: Share Your Creations! Continued	45 minutes
3:45–4:30PM	Activity IV: Next Steps	45 minutes

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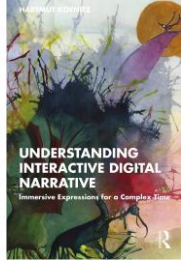
This schedule is flexible. We'll adjust times as the day goes on.

Slide 5

## INTERACTIVE DIGITAL NARRATIVE (IDN)

- A narrative expression implemented as a multimodal computational system with optional analog elements
- Interactors have a non-trivial influence on progress, perspective, content, and/or outcome
- Narrative is understood as a flexible cognitive frame for mentally projected worlds.

IDN artifact = program or system  
Output of interactive process = a narrative



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“Herman is concerned with “story logic,” which he considers to be a basic cognitive function in contrast to mathematical logic. For him, “storyworlds” designate the cognitive structure used to comprehend narratives, the narrative macro-design in contrast to the narrative micro-design (for example the role of verb semantics). Herman describes narrative as a cognitive structure that can be evoked by different coding strategies and media forms. In this vein, Herman defines narrative as a “forgiving, flexible cognitive frame for constructing, communicating, and reconstructing mentally projected worlds.” (Herman, 2002, p. 49)”, p. 71

Slide 6

## EXAMPLES: INTERACTIVE DIGITAL NARRATIVE (IDN)



**FAR AWAY FROM FAR AWAY**

Mobile only interactive story inspired by the early life of visionary Zita Cobb (National Film Board of Canada)



**WE WAIT**

VR experience that follows the story of Syrian migrants' attempts to cross the Mediterranean (BBC Connected Studios and Aardman Animations)

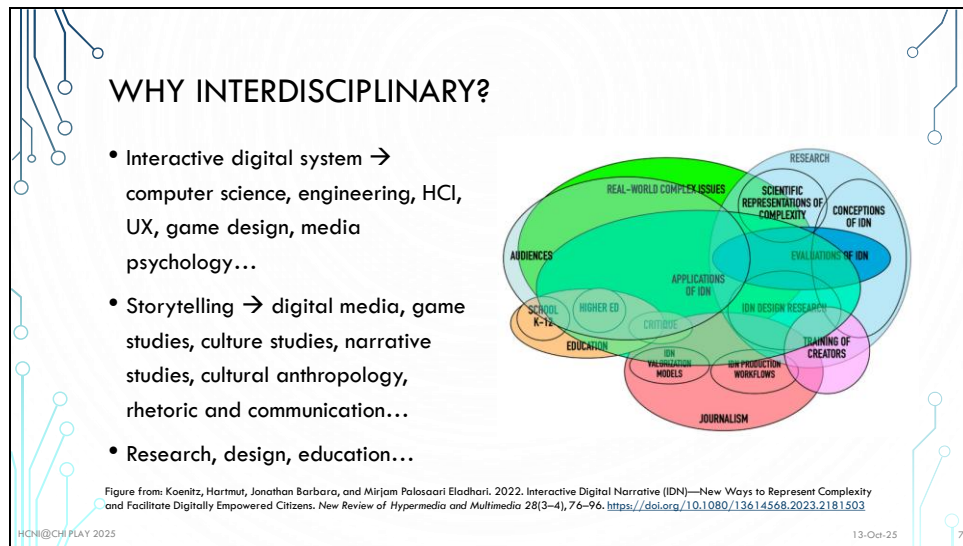


**PAPERS, PLEASE**

A single-player “Dystopian Document Thriller” game where the player is an immigration inspector in the fictional country of Arstotzka, 1982 (Lucas Pope)

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Slide 7



The thing with interdisciplinarity is that everyone shares what they know. What that also means is that we cannot assume that everyone knows what you mean. Example: how many of you know what psychoevolutionary synthesis is? So be patient with each other; we're all here to learn.

Figure from: Koenitz, Hartmut, Jonathan Barbara, and Mirjam Palosaari Eladhari. 2022. Interactive Digital Narrative (IDN)—New Ways to Represent Complexity and Facilitate Digitally Empowered Citizens. *New Review of Hypermedia and Multimedia* 28(3–4), 76–96. <https://doi.org/10.1080/13614568.2023.2181503>

Slide 8

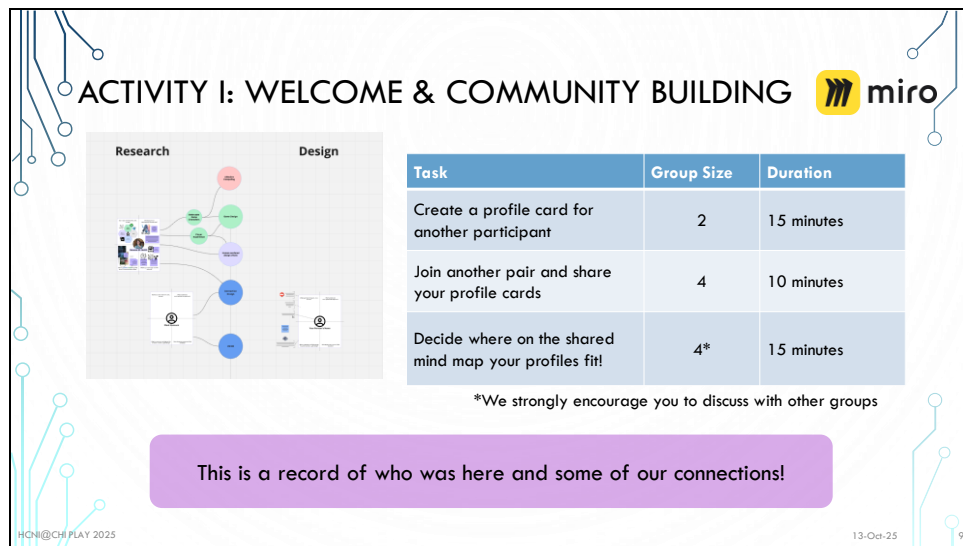



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## ACTIVITY I

WELCOME & COMMUNITY BUILDING

Slide 9



ACTIVITY I: WELCOME & COMMUNITY BUILDING 

Research Design

Task	Group Size	Duration
Create a profile card for another participant	2	15 minutes
Join another pair and share your profile cards	4	10 minutes
Decide where on the shared mind map your profiles fit!	4*	15 minutes


\*We strongly encourage you to discuss with other groups

This is a record of who was here and some of our connections!


HCNI@CHI PLAY 2025 13-Oct-25 9

Slide 10

### ACTIVITY I: WELCOME & COMMUNITY BUILDING



Pair up! You will create your partner's profile card on Miro

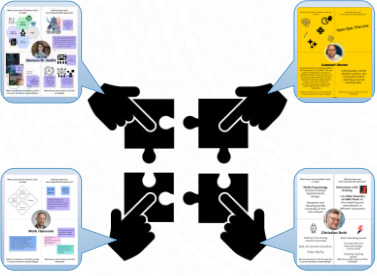


~15 minutes for you to create *both* profiles

HCNI@CHI PLAY 2025 13-Oct-25 10


Slide 11

### ACTIVITY I: WELCOME & COMMUNITY BUILDING



Join another group of two and share your profile cards  
Look for ways that you connect

Look for interdisciplinary connections!




~10 minutes to exchange everyone's cards

HCNI@CHI PLAY 2025 13-Oct-25 11

Slide 12


## ACTIVITY I: WELCOME & COMMUNITY BUILDING



Decide where to place your profiles on the shared mind map

DO keep an open mind  
DO discuss with other groups  
DO add connections, keywords, subcategories, etc. to the map

Remember to look for interdisciplinary connections!

 ~15 minutes to add all profiles to the map

HCNI@CHI PLAY 2025 13-Oct-25 12

Slide 13

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## BREAK!

GRAB SOME WATER AND HAVE A STRETCH! YOU DESERVE IT.

Slide 14



Slide 15

A presentation slide for HCNI@CHI PLAY 2025, titled "ACTIVITY II: EXPLORING STORYTELLING". The slide features a light blue background with a faint circuit pattern on the left side. The title is in a large, bold, black font. Below the title is a list of three bullet points: "IDNs are interactive → user actions change the narrative in some meaningful way", "Common misconception that narratives are static literary forms", and "What we know and understand about narrative is a product of the dominant culture and associated education systems". A purple box contains the text: "We need to step out of our comfort zones about what narrative are to truly explore IDN's storytelling potential". To the right of the text is a book cover titled "UNDERSTANDING INTERACTIVE DIGITAL NARRATIVE" by Rouse, Koenitz, & Haahr. At the bottom left, there is a small text block: "See also: Hartmut Koenitz, Andrea Di Pastena, Dennis Jansen, Brian de Lint, and Amanda Moss. (2018) The Myth of 'Universal' Narrative Models. In R. Rouse, H. Koenitz, & M. Haahr (Eds.), *Interactive Storytelling: 11th International Conference for Interactive Digital Storytelling, ICIDS 2018* (pp. 107– 120). [https://doi.org/10.1007/978-3-030-04028-4\\_8](https://doi.org/10.1007/978-3-030-04028-4_8)". The slide is framed by a thin black border.


I'm sure we know about the Hero's Journey. What else is out there?

See also: Hartmut Koenitz, Andrea Di Pastena, Dennis Jansen, Brian de Lint, and Amanda Moss. (2018) The Myth of "Universal" Narrative Models. In R. Rouse, H. Koenitz, & M. Haahr (Eds.), *Interactive Storytelling: 11th International Conference for Interactive Digital Storytelling, ICIDS 2018* (pp. 107– 120). [https://doi.org/10.1007/978-3-030-04028-4\\_8](https://doi.org/10.1007/978-3-030-04028-4_8)




Slide 16

## SOME (VERY) BROAD EXAMPLES




**NORTH AMERICAN  
INDIGENOUS DANCE**

- Historically for promoting community interaction
- Medium for prayer and storytelling
- Each dance has its own significance
- Movement, music, regalia
- A way to celebrate culture, resilience, and identity



**AFRICAN ORAL TRADITIONS**

- Traditions vary between groups, but all revere storytellers as caretakers of cultural memories
- Often verbally and communally performed with gestures, expressions, tone, music, song, and dance (solo and group performances)
- Primary means of conveying culture, attitude, morals, values, knowledge between generations



**JAPANESE NOH (能, NŌ)  
THEATRE**

- Classical dance-drama performed since the 14<sup>th</sup> century
- Structured around song and dance
- Slow movement, monotone, poetic language, rich and heavy costumes, masks, fans
- Themes related to dreams, supernatural worlds, ghosts, spirits

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<https://culturallyours.com/podcast/native-american-dance-tradition/>  
<https://www.africarebirth.com/reviving-the-oral-traditions-of-africa-reclaiming-our-knowledge-as-a-weapon-for-decolonization-and-liberation/>  
<https://www.japan-guide.com/e/e2091.html>

Slide 17

## GUIDELINES FOR RESPECTFUL WORK: SIX Rs OF INDIGENOUS RESEARCH

<p><b>Respect</b></p> <ul style="list-style-type: none"> <li>"Due regard for the feelings, wishes, rights, and traditions of others"</li> <li>Approach with the intent to learn and understand other perspectives</li> <li>How does the work honour their knowledge and traditions?</li> <li>Critically examine and acknowledge assumptions, biases, and position that influence your work</li> </ul>	<p><b>Relationship</b></p> <ul style="list-style-type: none"> <li>"accountability for all relationships (connected to the work)"</li> <li>Clearly communicate your motivations and intentions for the work</li> <li>Consider how your work could impact the group you are learning from</li> <li>Approach the work as a way to build trust with the group</li> </ul>	<p><b>Relevance</b></p> <ul style="list-style-type: none"> <li>"research must be meaningful and useful to [the communities you are working with]"</li> <li>Consider how your research reflects the priorities, experiences, perspectives, and practices of the group you are learning from</li> </ul>
<p><b>Reciprocity</b></p> <ul style="list-style-type: none"> <li>"continuous and intentional exchange process"</li> <li>What benefits could group members see in your work? How could they receive them?</li> <li>How can you recognize their contributions (e.g., accurate attributions)?</li> </ul>	<p><b>Responsibility</b></p> <ul style="list-style-type: none"> <li>"accountability for the people and knowledge put in our trust."</li> <li>Critically assess your work to avoid reinforcing stereotypes and prejudices</li> <li>Be honest, open, and fair</li> </ul>	<p><b>Representation</b></p> <ul style="list-style-type: none"> <li>"having presence at the table and acting or speaking on behalf of another person or group"</li> <li>Actively seek out information created by members of the community and acknowledge their contributions</li> <li>Do not present yourself as a representative of the group you are learning from unless you are a member of that group</li> </ul>

Based on: Ranalda L. Tsosie, Anne D. Grant, Jennifer Harrington, Ke Wu, Aaron Thomas, Stephan Chase, D'Shane Barnett, Salena Beaumont Hill, Annjeanette Belcourt, Blakely Brown, and Ruth Plenty Sweetgrass-She Kills. 2022. The Six Rs of Indigenous Research. *Journal of American Indian Higher Education* 33(4). <https://tribalcollegejournal.org/the-six-rs-of-indigenous-research/> and the Indigenous Knowledge Circle (IKC) of the National Boreal Caribou Knowledge Consortium (INCKC) personal accountability pledge (<https://ipcknowledgebasket.ca/personal-accountability-pledge/>)

HCNI@CHI PLAY 2025 13-Oct-25 17

Based on: Ranalda L. Tsosie, Anne D. Grant, Jennifer Harrington, Ke Wu, Aaron Thomas, Stephan Chase, D'Shane Barnett, Salena Beaumont Hill, Annjeanette Belcourt, Blakely Brown, and Ruth Plenty Sweetgrass-She Kills. 2022. The Six Rs of Indigenous Research. *Journal of American Indian Higher Education* 33(4). <https://tribalcollegejournal.org/the-six-rs-of-indigenous-research/> and the [Indigenous](https://waterloo-touchlab.github.io/hcni/activities/)

Knowledge Circle (IKC) of the National Boreal Caribou Knowledge Consortium (NBCKC) personal accountability pledge (<https://ipcaknowledgebasket.ca/personal-accountability-pledge/>)

Slide 18

## GUIDELINES FOR RESPECTFUL WORK: REFLEXIVITY

Reflexivity is a set of continuous, collaborative, and multifaceted practices through which researchers self-consciously critique, appraise, and evaluate how their subjectivity and context influence the research processes.

Based on: Francisco M. Olmos-Vega, Renée E. Stalmeijer, Lara Varpio, & Renate Kahlke (2022). A practical guide to reflexivity in qualitative research: AMEE Guide No. 149. *Medical Teacher*, 45(3), 241–251. <https://doi.org/10.1080/0142159X.2022.2057287>

HCNI@CHI PLAY 2025 13-Oct-25 18

Based on: Francisco M. Olmos-Vega, Renée E. Stalmeijer, Lara Varpio, & Renate Kahlke (2022). A practical guide to reflexivity in qualitative research: AMEE Guide No. 149. *Medical Teacher*, 45(3), 241–251. <https://doi.org/10.1080/0142159X.2022.2057287>

Slide 19

## GUIDELINES FOR RESPECTFUL WORK: REFLEXIVITY

Positionality is self-reflection of identity, including beliefs, attitudes, behaviours, work, and practice, to acknowledge that it impacts the work you do

- Positionality or Self-Declaration statements are one way to integrate reflexivity in your work
- Transparent communication of your positionality, demonstration of commitment to equity, diversity, and inclusion, and recognizing the value of other identities

Based on: Sarah Homen. (2025) How to Write a 'Positionality Statement' (and Why Positioning Identity Matters in Decolonising Research and Knowledge Production). The Equality Institute. <https://www.equalityinstitute.org/how-to-write-a-positionality-statement-and-why-positioning-identity-matters-in-decolonising-research-and-knowledge-production/>

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It's like looking at a sculpture as a group. You've spread out around it so everyone can see, but that also means that everyone sees something a bit different. They're not the same, but they're all true and contribute to your collective understanding of the sculpture.

Based on: Sarah Homen. (2025) How to Write a 'Positionality Statement' (and Why Positioning Identity Matters in Decolonising Research and Knowledge Production). The Equality Institute.  
<https://www.equalityinstitute.org/how-to-write-a-positionality-statement-and-why-positioning-identity-matters-in-decolonising-research-and-knowledge-production/>

## Slide 20

# ACTIVITY II: EXPLORING STORYTELLING

Google Docs

Task	Group Size	Duration
Pick a storytelling structure/tradition + decide how to incorporate reflexivity	3-4	~10 minutes
Research!		~50 minutes

You will be using this for the next activity!

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13-Oct-25

20

Slide 21



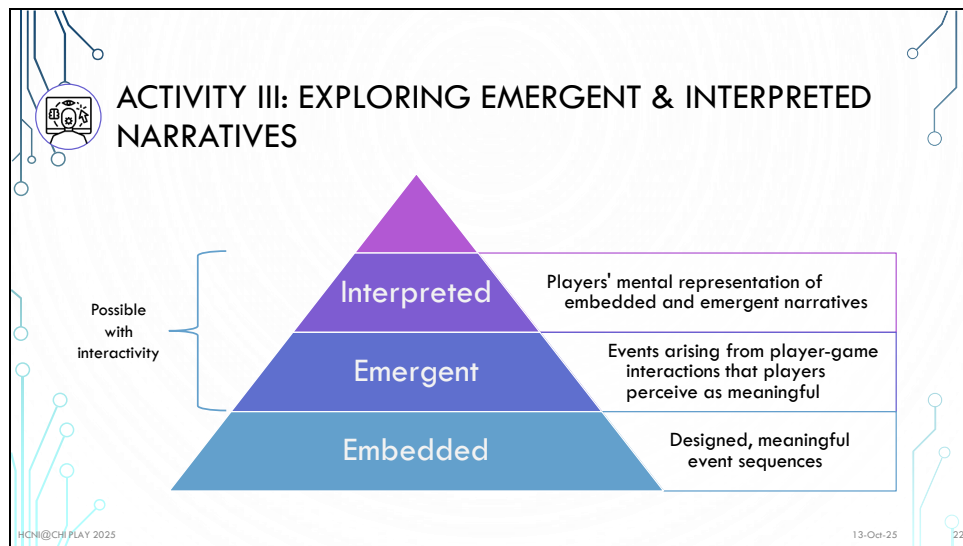
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## ACTIVITY III

EXPLORING EMERGENT AND INTERPRETED NARRATIVES

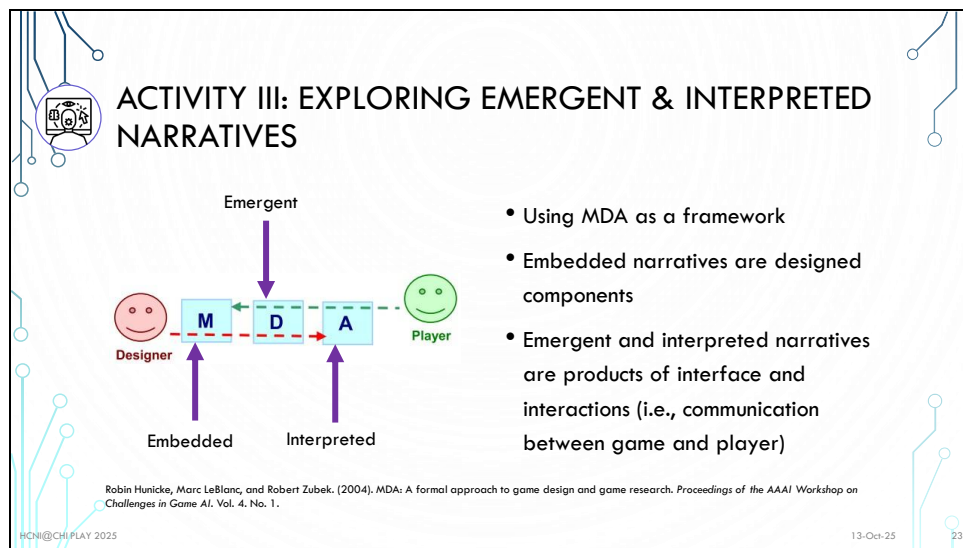


Slide 22



Based on: [https://medium.com/@elle\\_mcfadzean/4-types-of-narrative-in-games-20a101153f5f](https://medium.com/@elle_mcfadzean/4-types-of-narrative-in-games-20a101153f5f)

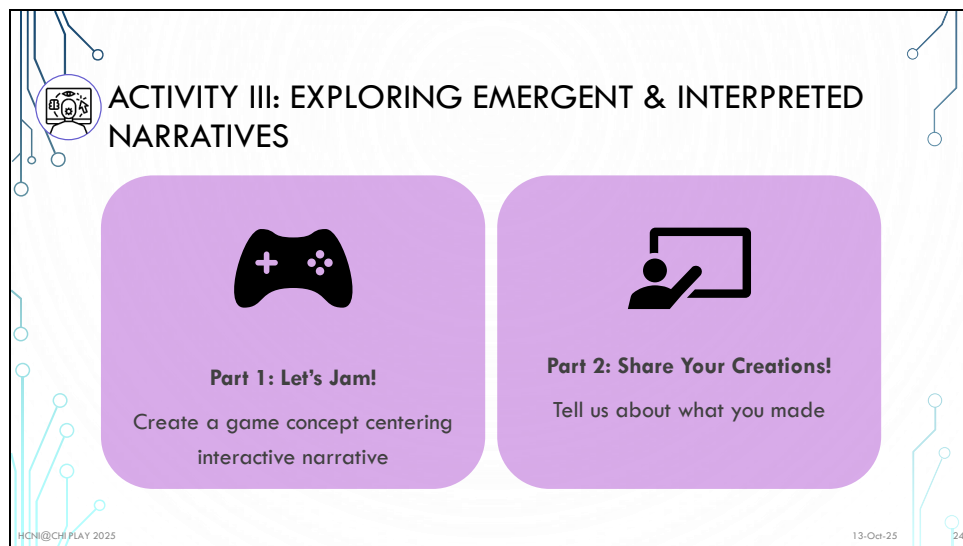
Slide 23



Robin Hunicke, Marc LeBlanc, and Robert Zubek. (2004). MDA: A formal approach to game design and game research. *Proceedings of the AAAI Workshop on Challenges in Game AI*. Vol. 4. No. 1.

Another great framework that integrates MDA and narrative is MTDA+N:  
<https://www.firstpersonscholar.com/a-working-theory-of-game-design/>

Slide 24




Slide 25

### ACTIVITY III, PART 1: EXAMPLE HCI CONCEPT


Internal consistency (usability heuristic) → similar things should look and act the same to help users learn

Elements  
(e.g., fire)  
Physics (e.g., gravity)



*The Legend of Zelda: Breath of the Wild*

Social (e.g., race, class/wealth, population density)



*Mafia III*

HCNI@CHI PLAY 2025      Examples from Mark Brown's "The Rise of the Systemic Game" (GDTK on YouTube): <https://www.youtube.com/watch?v=SnpAAX9CkIc>      13-Oct-25      25

Examples from Mark Brown's "The Rise of the Systemic Game" (GDTK on YouTube):  
<https://www.youtube.com/watch?v=SnpAAX9CkIc>

In *The Legend of Zelda: Breath of the Wild* elements behave in predictable ways → players can test predictions to create interesting emergent behaviours (e.g., setting fires to create updrafts for gliding)


*Mafia III* is an example where designers *break* this heuristic to make a statement → simple changes to how quickly the police respond to crimes based on neighbourhood social standing (e.g., race, income level) sends a powerful message about life for African Americans

Game set in New Bordeaux (New Orleans), 1968 → end of the Civil Rights (social) Movement of which New Orleans was a focal point (e.g., Ruby Bridges in 1960)


Slide 26

### ACTIVITY III, PART 1: LET'S JAM!


Key Steps in  
The Rapid Prototyping Process



Prototyping



Feedback



Refinement


And Repeat!

- The only way to know if an idea works is to try it out!
- Use low-fidelity prototyping and testing to try things out quickly



Ideas that don't work are still valuable! You've learned from them and have ideas for the next iteration.

HCNI@CHI PLAY 2025      13-Oct-25      26

Slide 27



## ACTIVITY III, PART 1: LET'S JAM!

Task	Group Size	Duration
Create your narrative game concept Document your concept + process	3–4	2 x 60 minutes (One before and after lunch)


Try starting with some ideation methods to get warmed up!

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13-Oct-25

27

Slide 28



## ACTIVITY III, PART 1: DESIGN PROMPTS

**Option 1**

Design an interactive system that tells a story through user frustration

OR

Design a system that starts with guidance and ends with manipulation

**Option 2**

Choose a proverb or similar from the culture which's storytelling tradition/structure you researched as your prompt

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13-Oct-25

28





Slide 29

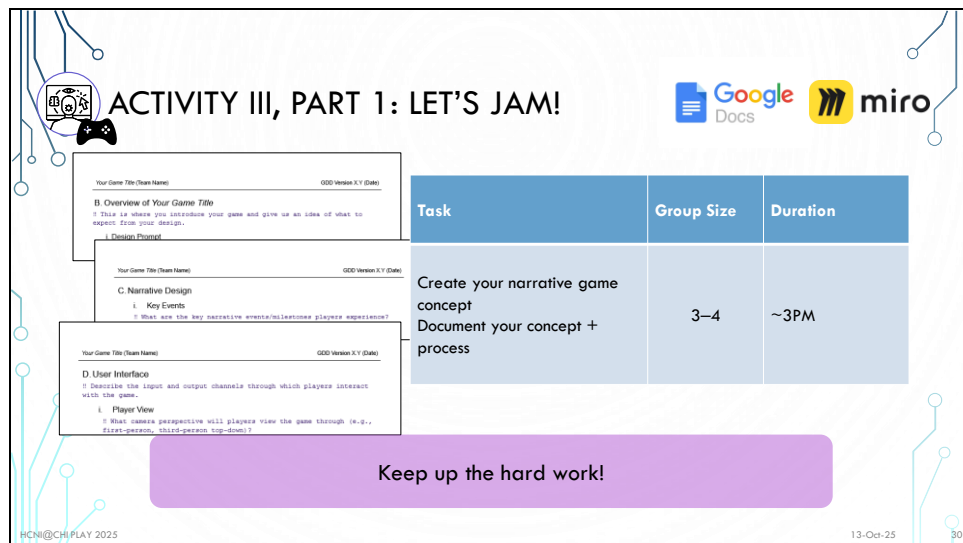


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# LUNCH!

LET'S TAKE A BREATHER AND REFUEL

Slide 30



Google Docs miro

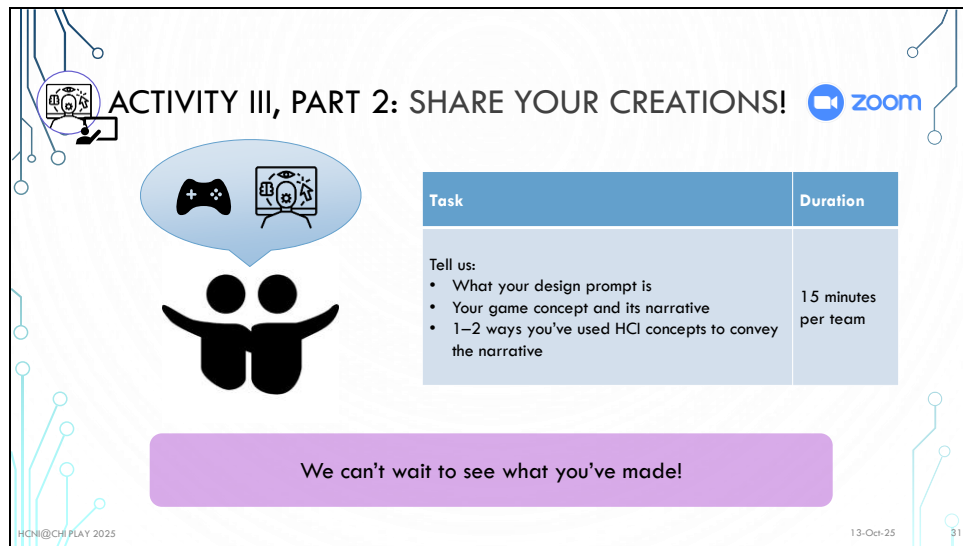
## ACTIVITY III, PART 1: LET'S JAM!


Task	Group Size	Duration
Create your narrative game concept Document your concept + process	3-4	~3PM


Keep up the hard work!

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Slide 31



Activity III, Part 2: SHARE YOUR CREATIONS! 



Task	Duration
Tell us: <ul style="list-style-type: none"><li>• What your design prompt is</li><li>• Your game concept and its narrative</li><li>• 1–2 ways you've used HCI concepts to convey the narrative</li></ul>	15 minutes per team

We can't wait to see what you've made!

HCNI@CHI PLAY 2025 13-Oct-25 31

Slide 32

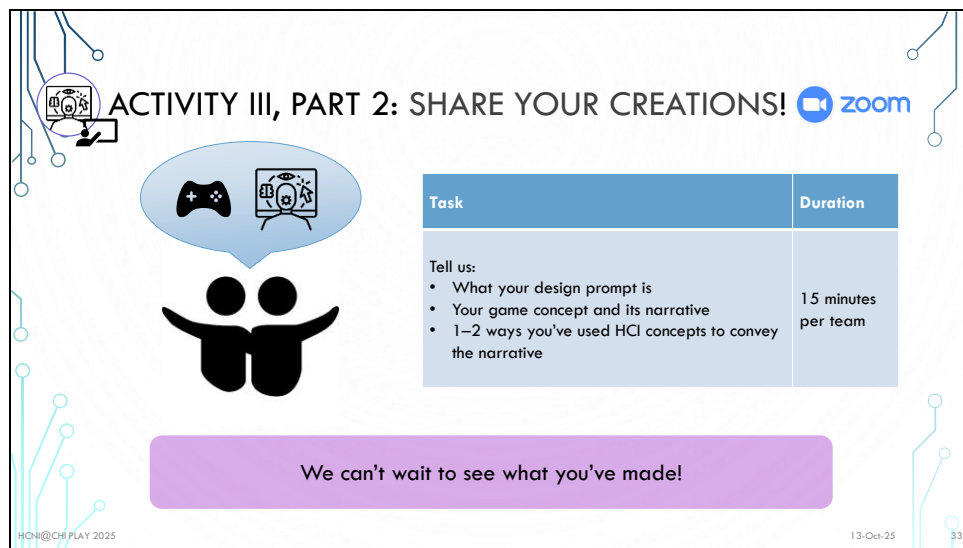



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**BREAK!**

SHAKE IT OUT AND HAVE SOME WATER. YOU'RE DOING AMAZING WORK!

Slide 33



ACTIVITY III, PART 2: SHARE YOUR CREATIONS! 

Task	Duration
<p>Tell us:</p> <ul style="list-style-type: none"><li>• What your design prompt is</li><li>• Your game concept and its narrative</li><li>• 1–2 ways you've used HCI concepts to convey the narrative</li></ul>	15 minutes per team

We can't wait to see what you've made!

HCNI@CHI PLAY 2025 13-Oct-25 33

Slide 34



Slide 35

This slide has a light blue background with a faint circuit pattern. On the left, there is a network diagram with nodes and connecting lines. Four speech bubbles are attached to the network: one at the top with a game controller icon, one on the left with a question mark and a sad face icon, one at the bottom with a list icon, and one on the right with a puzzle piece icon. The title "ACTIVITY IV: NEXT STEPS" is at the top left. To the right of the network diagram is a bulleted list. The slide is enclosed in a black rectangular border.

**ACTIVITY IV: NEXT STEPS**

- What are the problems or concepts that you want to investigate related to:
  - Workshop activities?
  - Workshop goals and objectives?
  - IDN research and design?
- Consider what disciplines we should involve to start addressing them

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Slide 36

