STUDIO IMUGI

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Chasing the Information Horizon: Designing Information Driven Games

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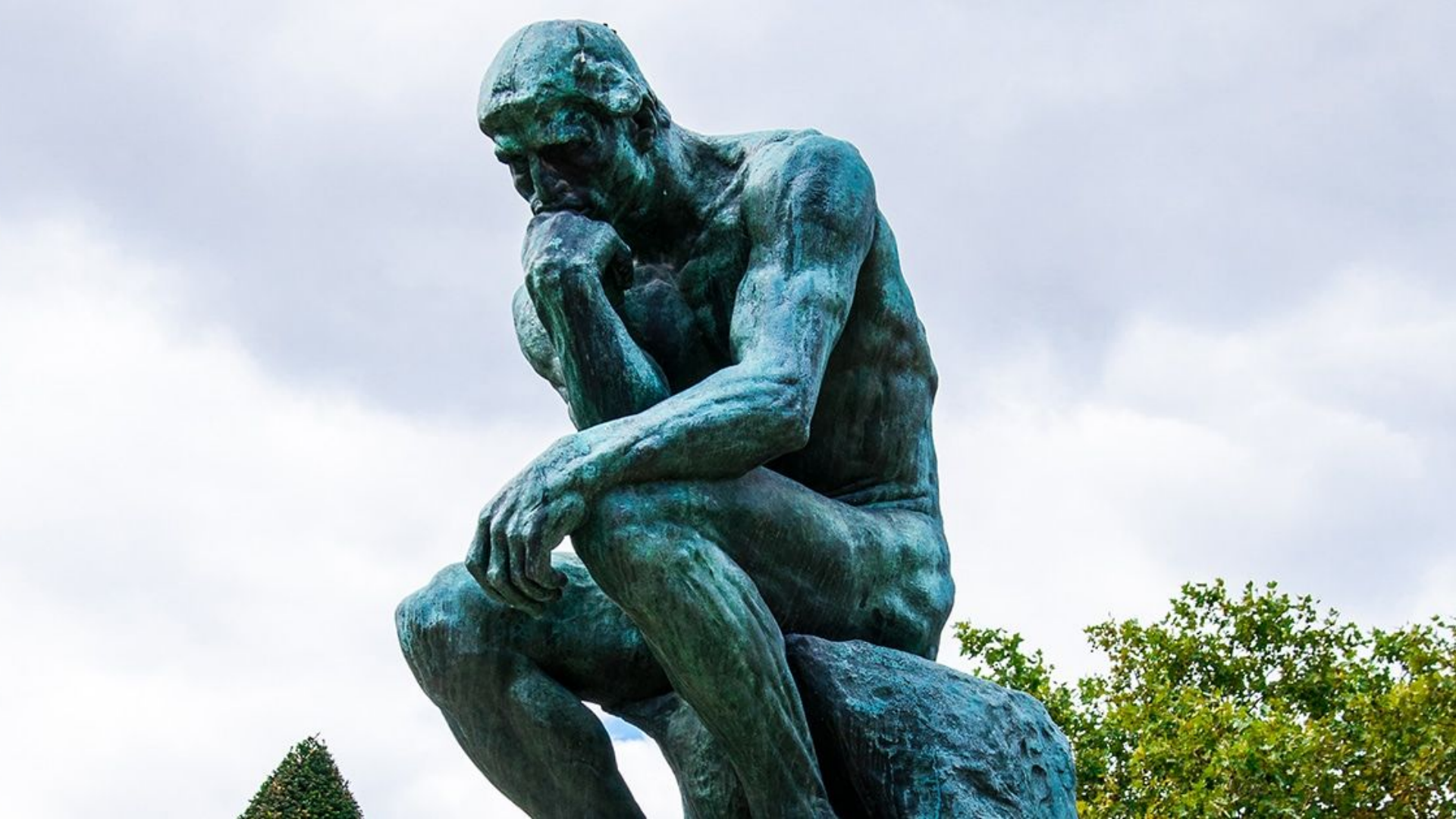
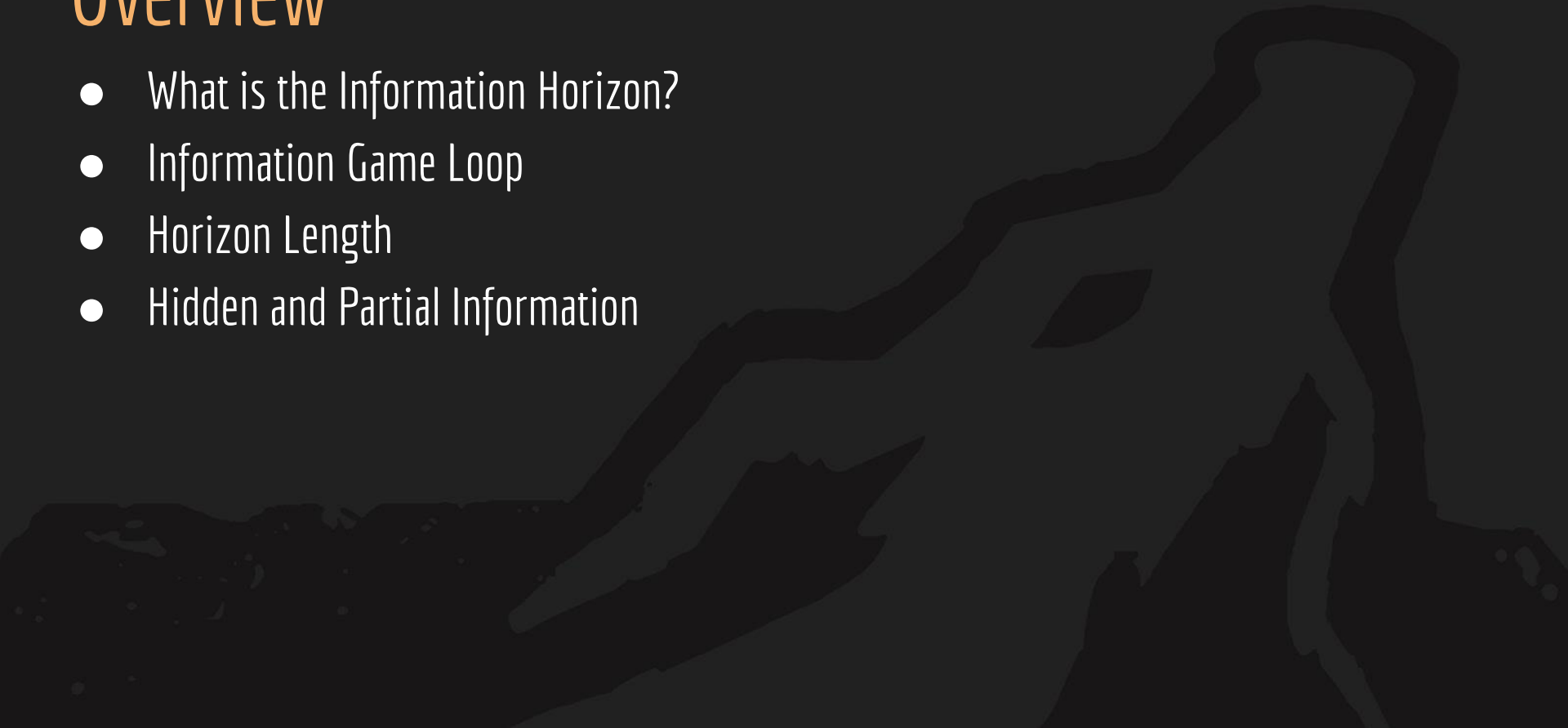
Kitfox Games



Overview

- What is the Information Horizon?
- Information Game Loop
- Horizon Length
- Hidden and Partial Information



What is the Information Horizon?

Information Horizon

- Games are possibility space generators
- The player is an explorer of possibility space
- The Known-Unknown. The edge of what the player can see.

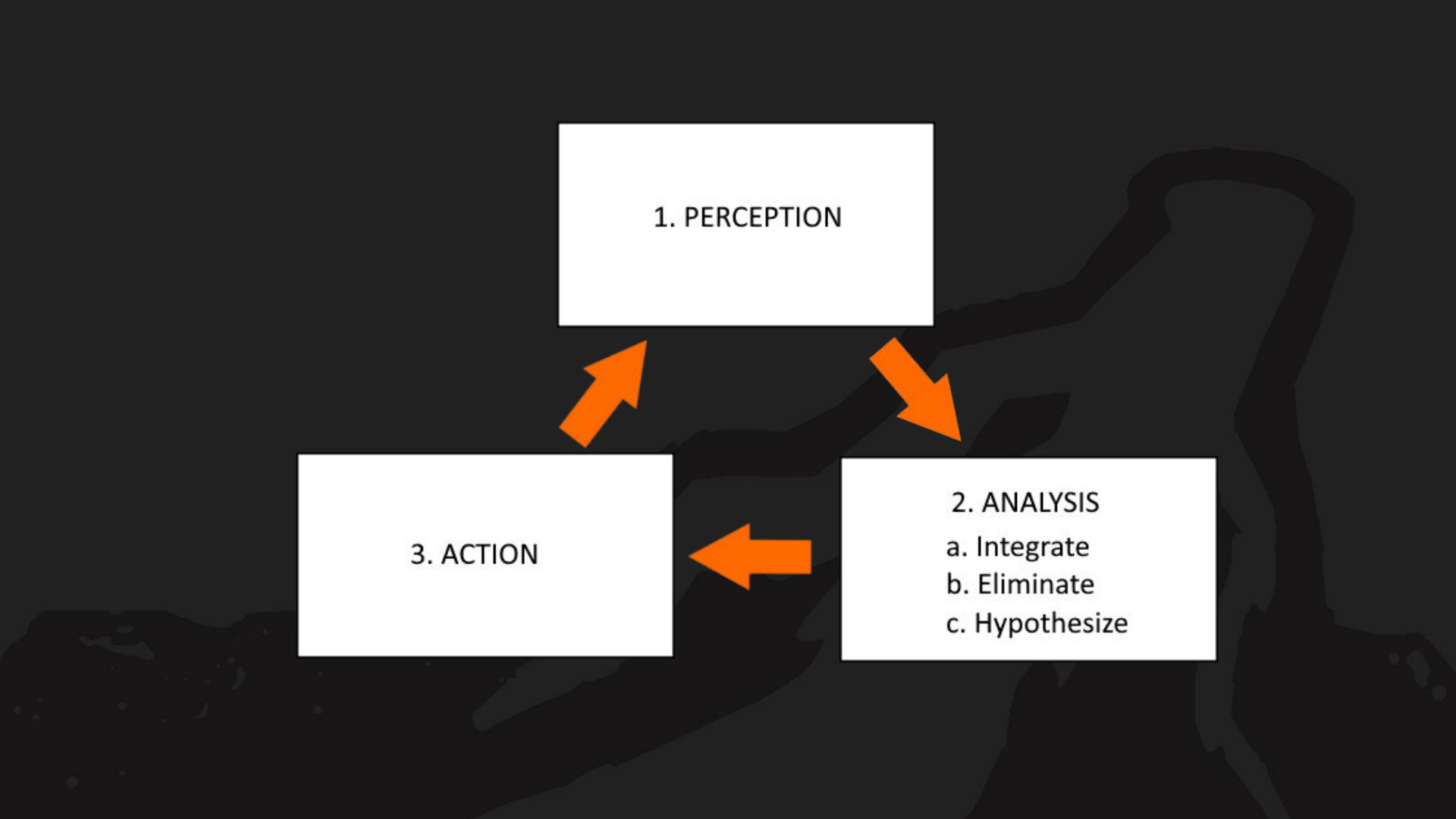
AM 04:20

200
200
100
200
4/3
Dark Age
AoE2Tools: 202/201/4 (1)
Caliph Abu Bekr: 173/173/4 (1)
Scout Cavalry
45/45
3
0/2
Koreans
AoE2Tools
CONQUERORS

Y
X
Falchion
Bronze Axe
49
Chrom
HP 15
Atk 11
Hit 99%
Crit 1%
Frederick
35%
5%
Ruffian
10 HP
5 Atk
57% Hit
0% Crit
8. Combat Forecast

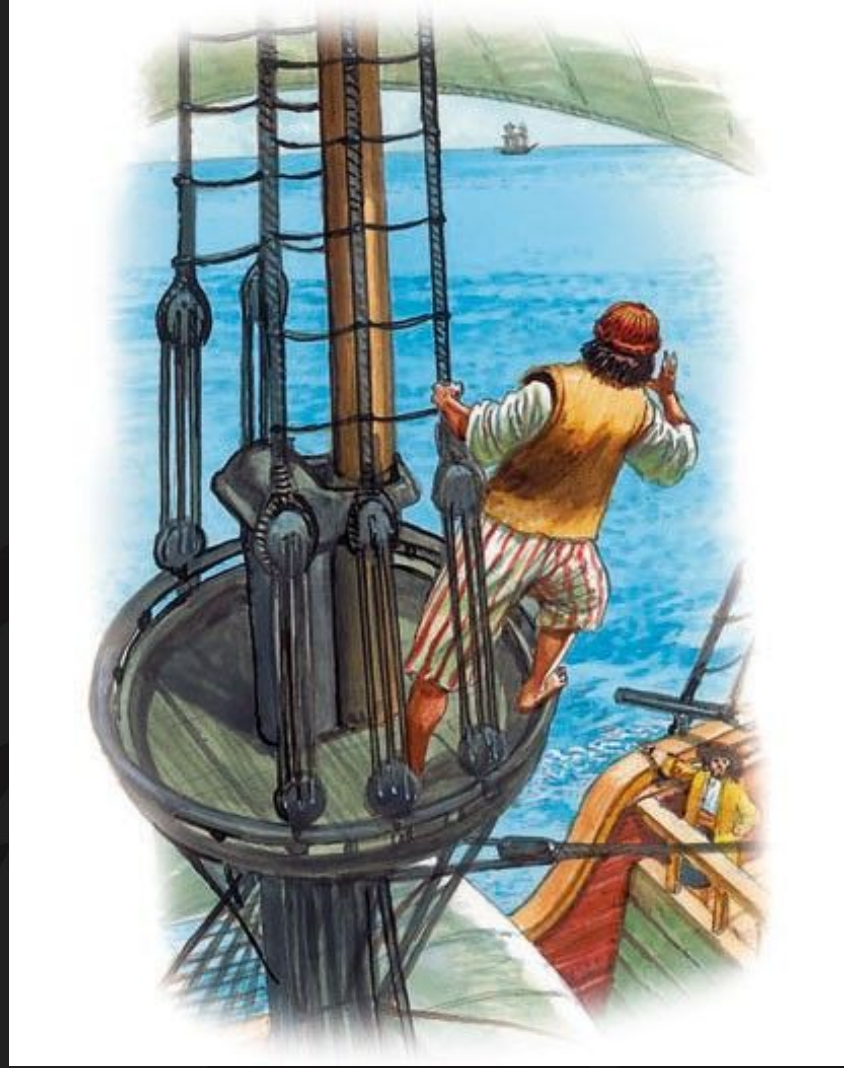
Phoenix
This piece of cloth proves who the real murderer is. Who killed Neil Marshall, you ask?

Information Game Loop


1. PERCEPTION
2. ANALYSIS
a. Integrate
b. Eliminate
c. Hypothesize
3. ACTION

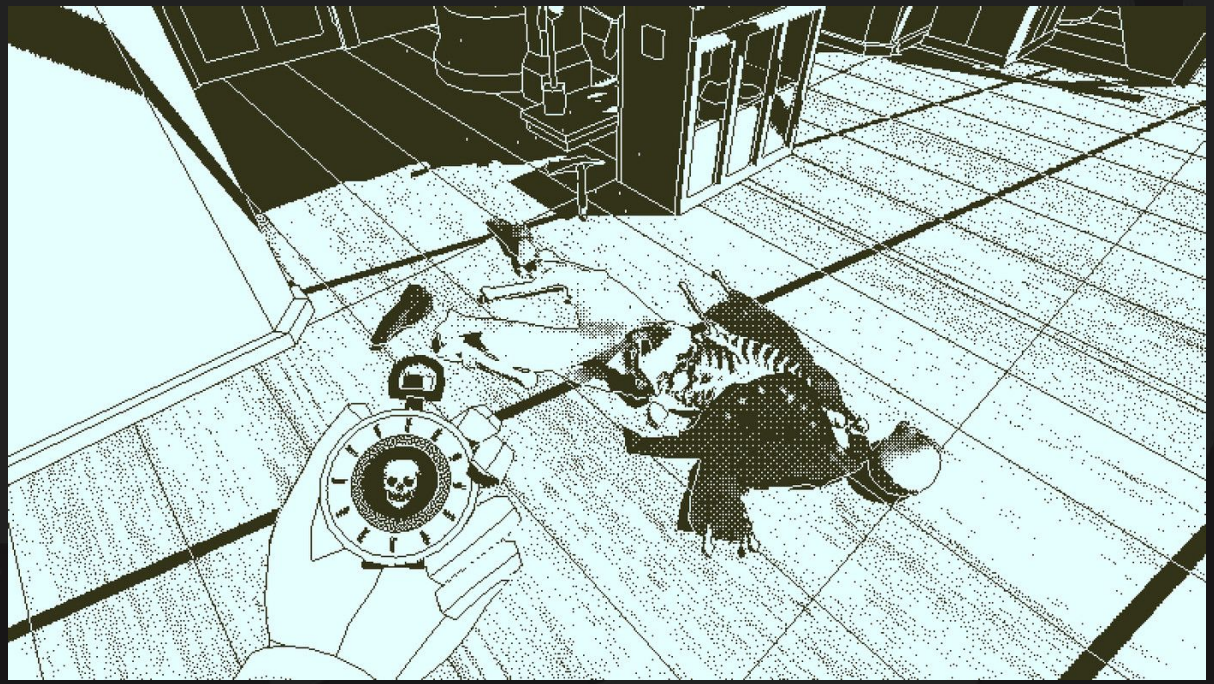
1. Perception - The Lookout

- The player gains information about the possibility space
- Can be active or passive

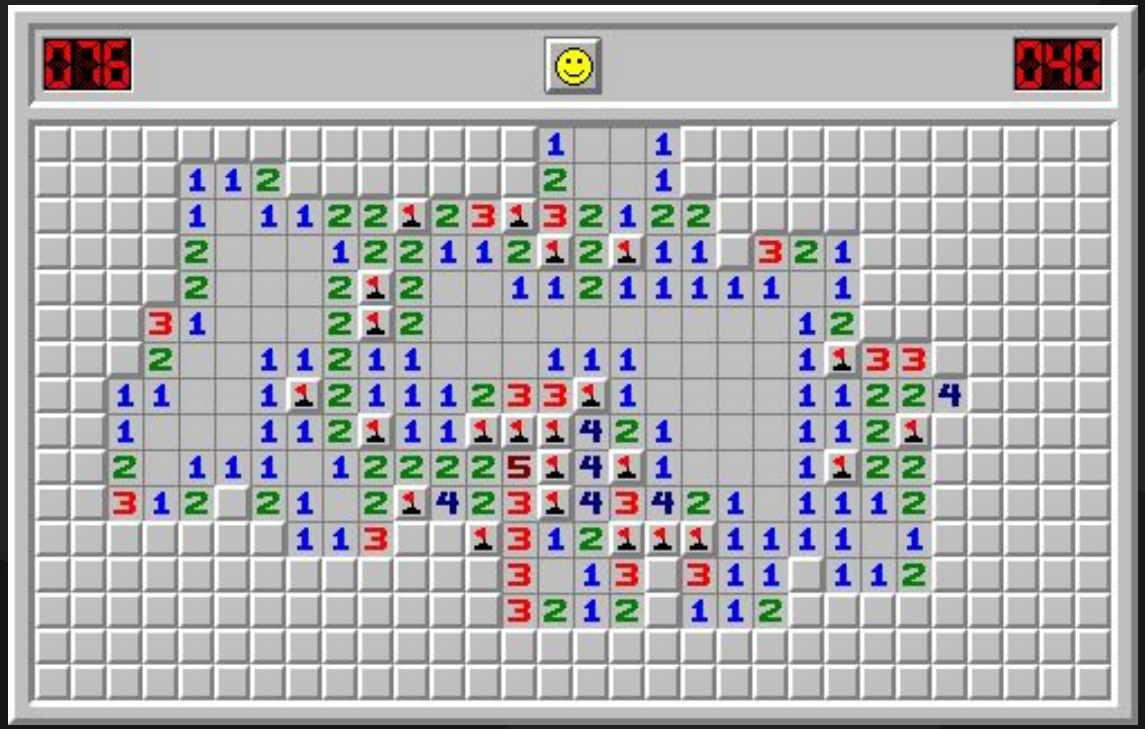


2. Analysis - The Navigator

2a. Integrate

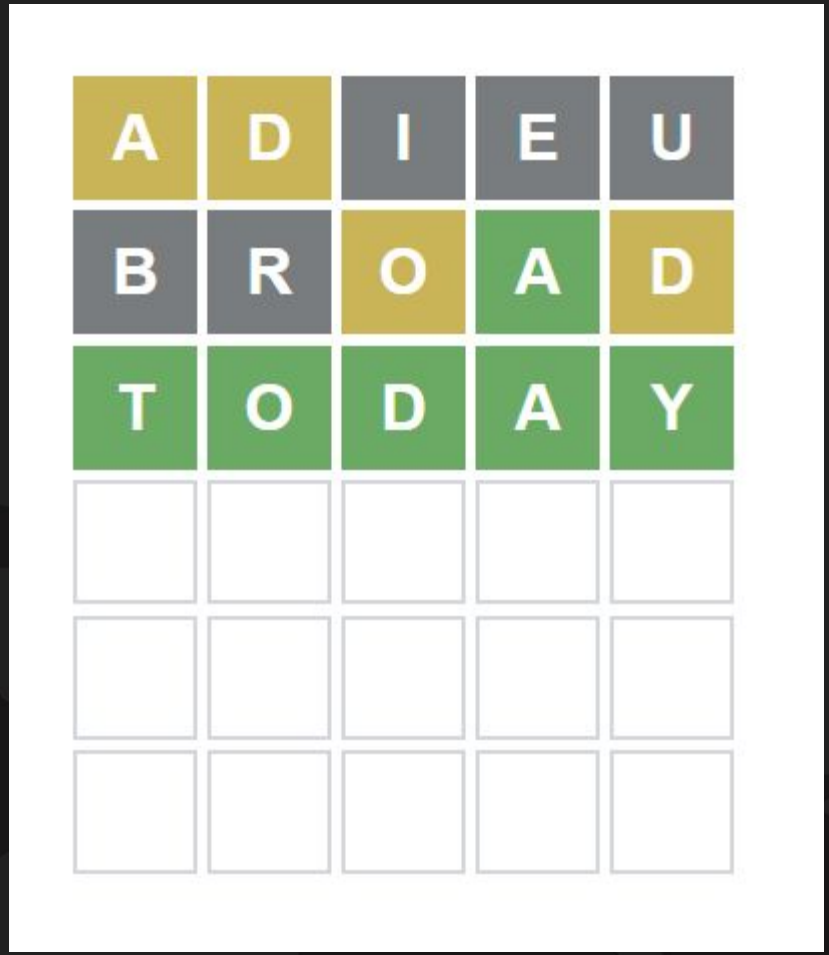


2b. Eliminate



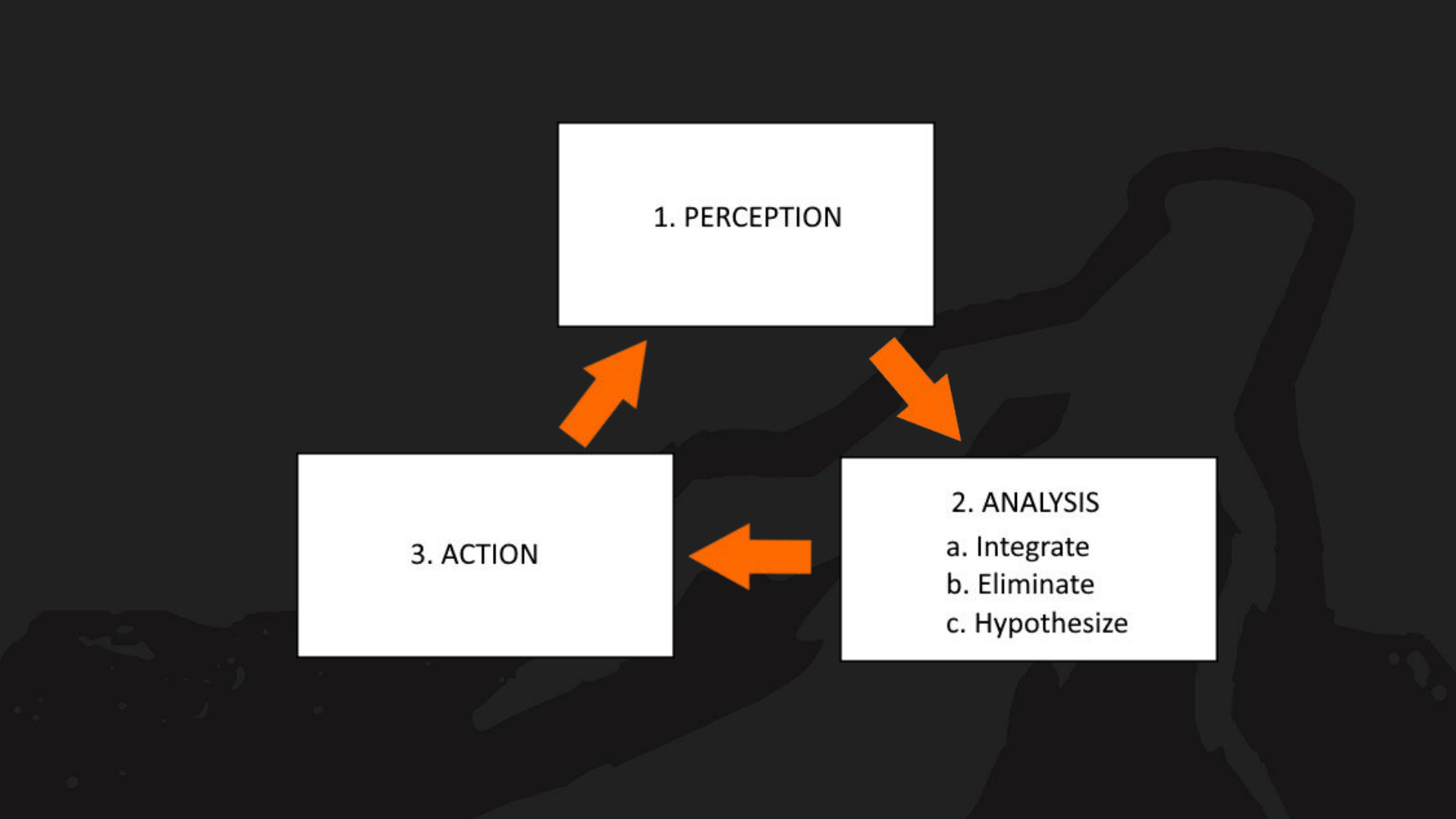
2c. Hypothesis

- The player makes their best guess about the Information Horizon.
- Most important and satisfying step since it uses the player's imagination.



3. Action - The Pilot

Objection!


1. PERCEPTION
2. ANALYSIS
a. Integrate
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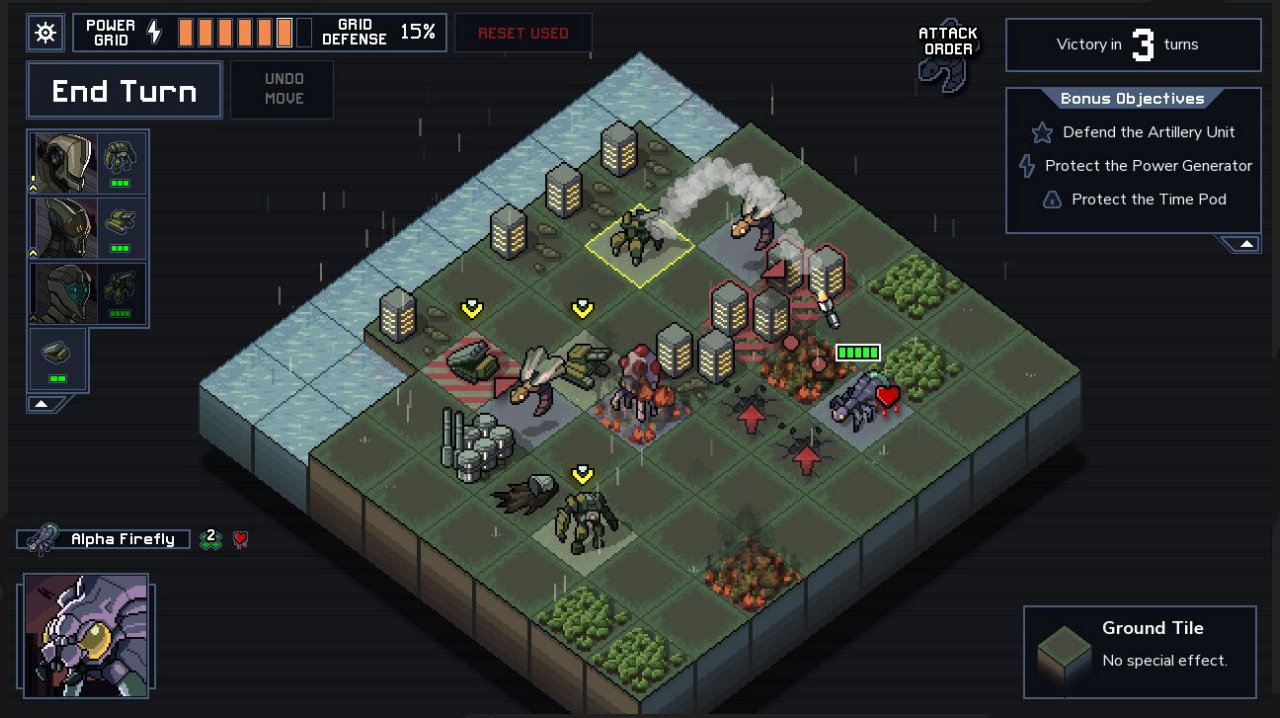
Making an Engaging Information Game Loop

- Consistent Mechanics
- Tools over Events
- Inflow of Relevant Information

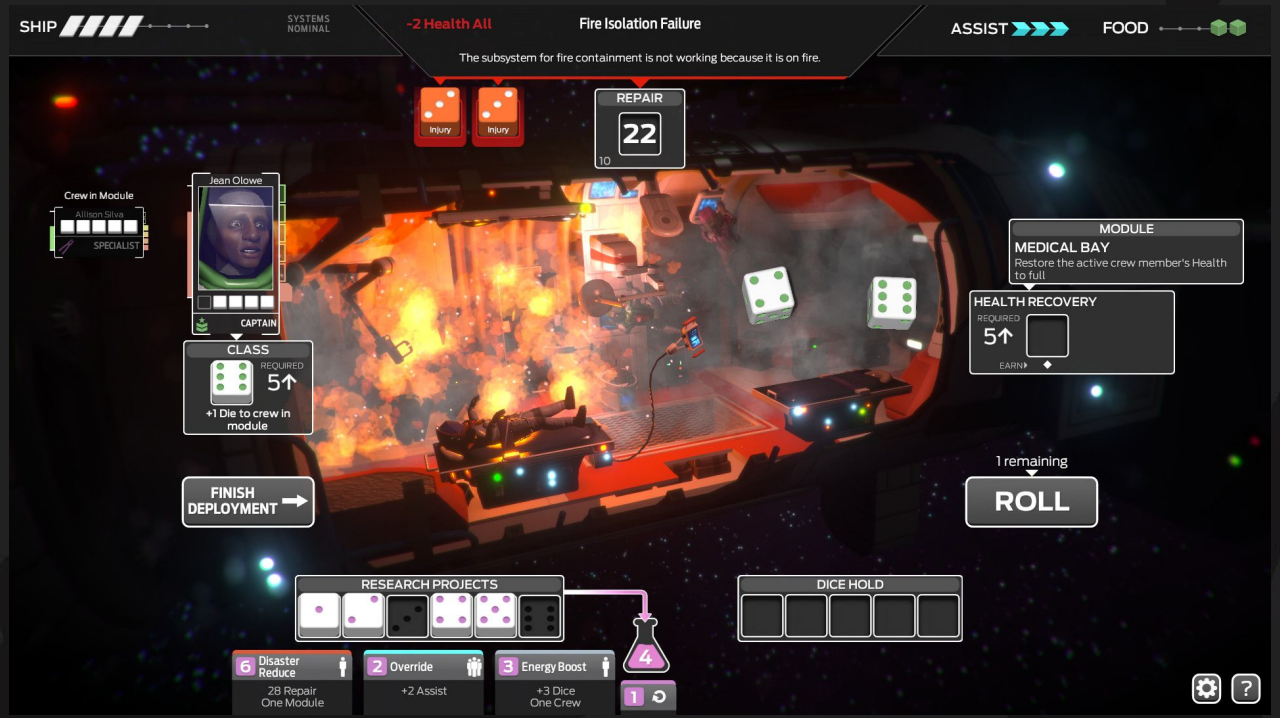
Horizon Length

Horizon Length

Long Horizons - Deterministic Gameplay



Short Horizons - Probabilistic Gameplay



Information Fatigue

Hidden and Partial Information

Hidden and Partial Information

House Iosefka

Responsibility:
Fervor

Vasin Iosefka
??????
??????

Ludmila Iosefka
Full of Fervor?
??????

Dimas Iosefka
Disciplined?
??????

Chessa Iosefka
Obedient?
??????

Suzan Iosefka
??????
??????

Fania Iosefka
Ignorant?
??????

X

Adjudicator Iosefka

Inquiries Remaining: 2

Approval: Satisfied

Begin Inquiry

Rename Villager

Confine
(3 Open Vaults)

Appoint Advisor

Satisfied
Kegnni
Ignorance

Satisfied
Iosefka
Fervor

Satisfied
Cadwell
Discipline

Satisfied
Efferson
Penitence

Neutral
Blackborn
Obedience

Good. I was growing impatient. Now let's observe the rest.
Gideon suggested setting the Coronet to have maximum aether output. I warned him that doing so is highly dangerous!
Ada
Reuben
Auto-Pause
Accuse
Contradict
Leave
Gideon
Miriam's Arrival
Order Reuben
Adjust Coronet
Prayer
Perform Ceremony
Miriam Dies
Reuben
Miriam's Arrival
Discuss Ceremony
Return to Work
Try to Stop Ceremony
Miriam Dies

Takeaways

Takeaways

- The Information Horizon is the known-unknown part of the game.
- The 3-step Information Game Loop - Perception, Analysis, Action - is how players engage with the Information Horizon.
- The Horizon Length changes how deterministic or probabilistic the game becomes.
- Use hidden (but discoverable!) information to have the benefits of both!

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