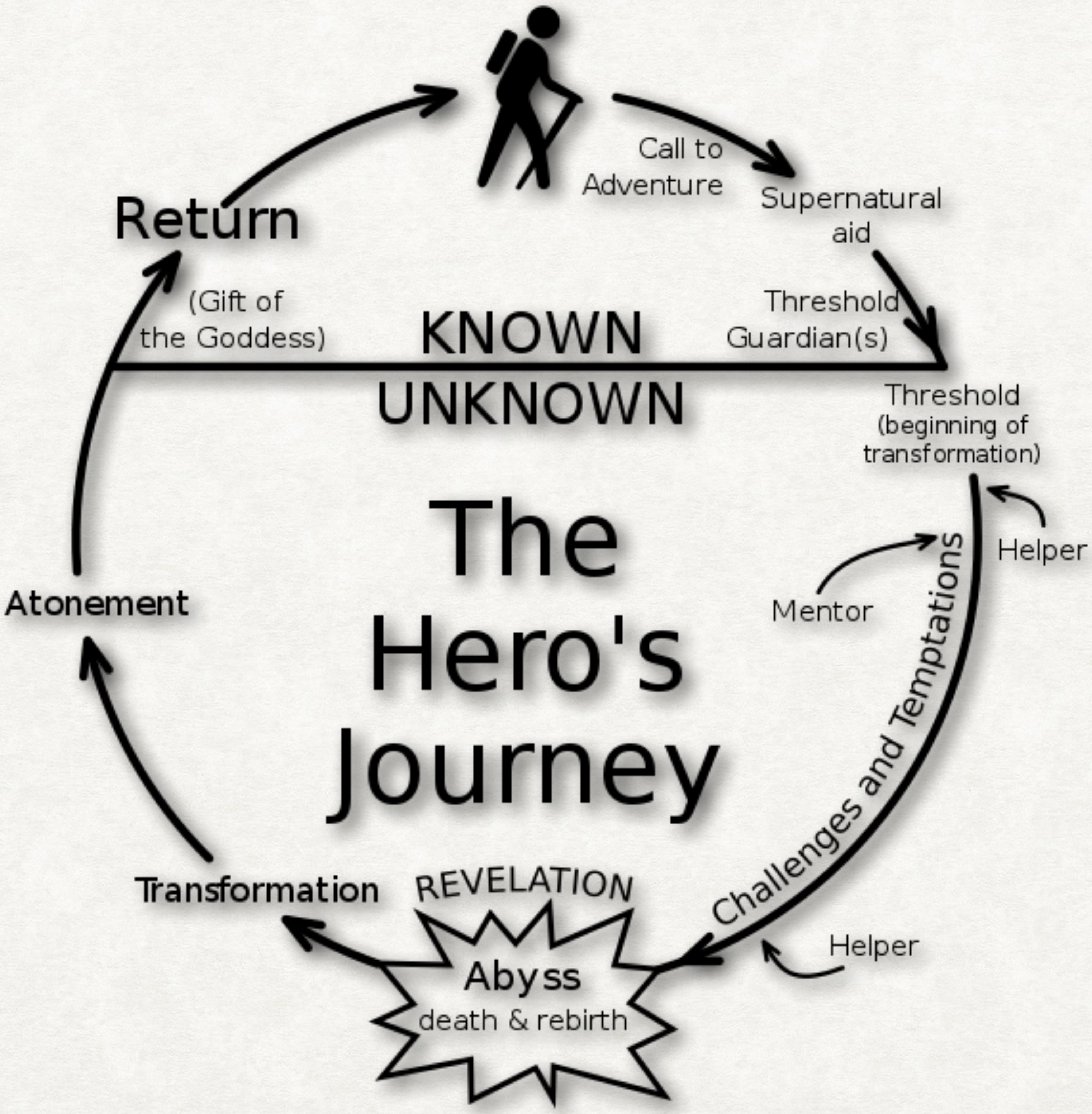
ADVENTURES IN PROGRAMMING…

CUNEIFORM

http://www.etoyoc.com/yoda/papers/tcl2019.Cuneiform_Slides.pdf



The Hero's Journey

Call to Adventure

Supernatural aid

Threshold Guardian(s)

KNOWN

UNKNOWN

Threshold (beginning of transformation)

Helper

Mentor

Challenges and Temptations

Helper

REVELATION

Abyss

death & rebirth

Transformation

Atonement

Return

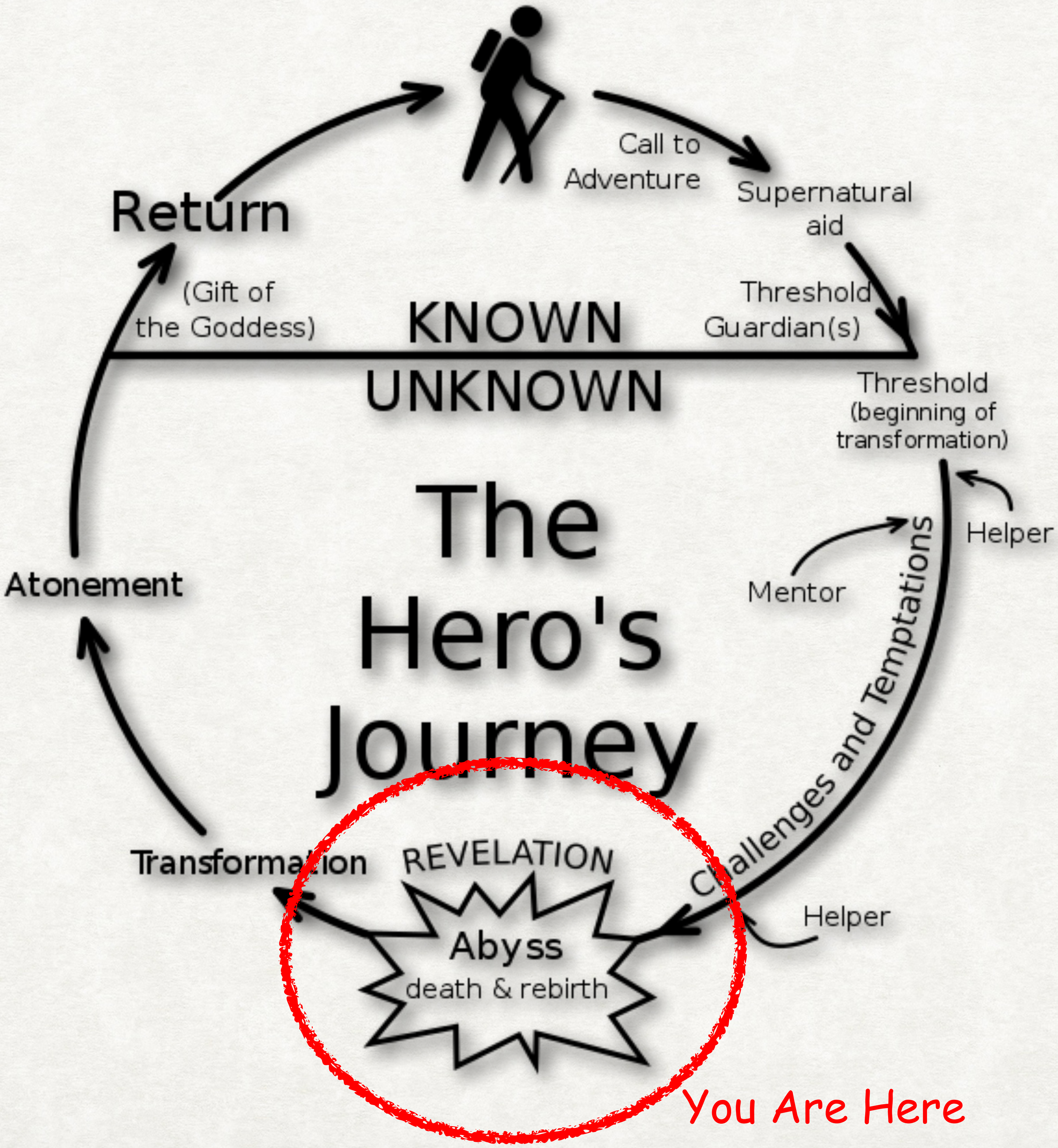
(Gift of the Goddess)

PRELUDE

- Cuneiform stated in the ashes of another project: a Text Adventure Engine
- Targeted the Tk Text Widget
- Display and command engine was working…
- …Just as Apple managed to do it’s yearly “Let’s destroy Tk” campaign

CONTENT IS KING

- Content is the most expensive part of a product
- Content require man-years of work to produce
- Entire generates of quirks are introduced to display engines, just to keep from having to re-generate content
- At that point the question was: Is Tk worth spending man-years of work developing content for
- TL/DR: NO



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You Are Here

CUNEIFORM

- A notation to allow content developers to target multiple display engines
    - Including the ultimate display engine: Print
- Utilizes Tcl as an expression engine
- Implements a Document Object Module using TclOO
- Written in Clay

CUNEIFORM FUNDAMENTALS

YOU FOOL, THIS ISN'T EVEN MY FINAL FORM!

LAST MINUTE FULFILLMENT

- Cuneiform defers content generation until immediately before fulfillment
- Content writers compose in Tcl Script
- The output is HTML, Tk, and SVG
- Tcl Script informs the display engine of the content writer’s intent
- The Display Engine sorts out the details and final layout

PROGRESS

- While the Game has yet to be written, the display engine supports several projects at T&E
- The major application is converting Sqlite databases to produce printed ship documentation and live views of damage control measures

SHIPBOARD DAMAGE CONTROL

- Navies maintain paper documentation for use “In case of emergency”
- Laminated instructions for procedures to perform for a variety of calamities
- IRM is useful for generating this documentation because all of the details for key systems are already encoded in the database

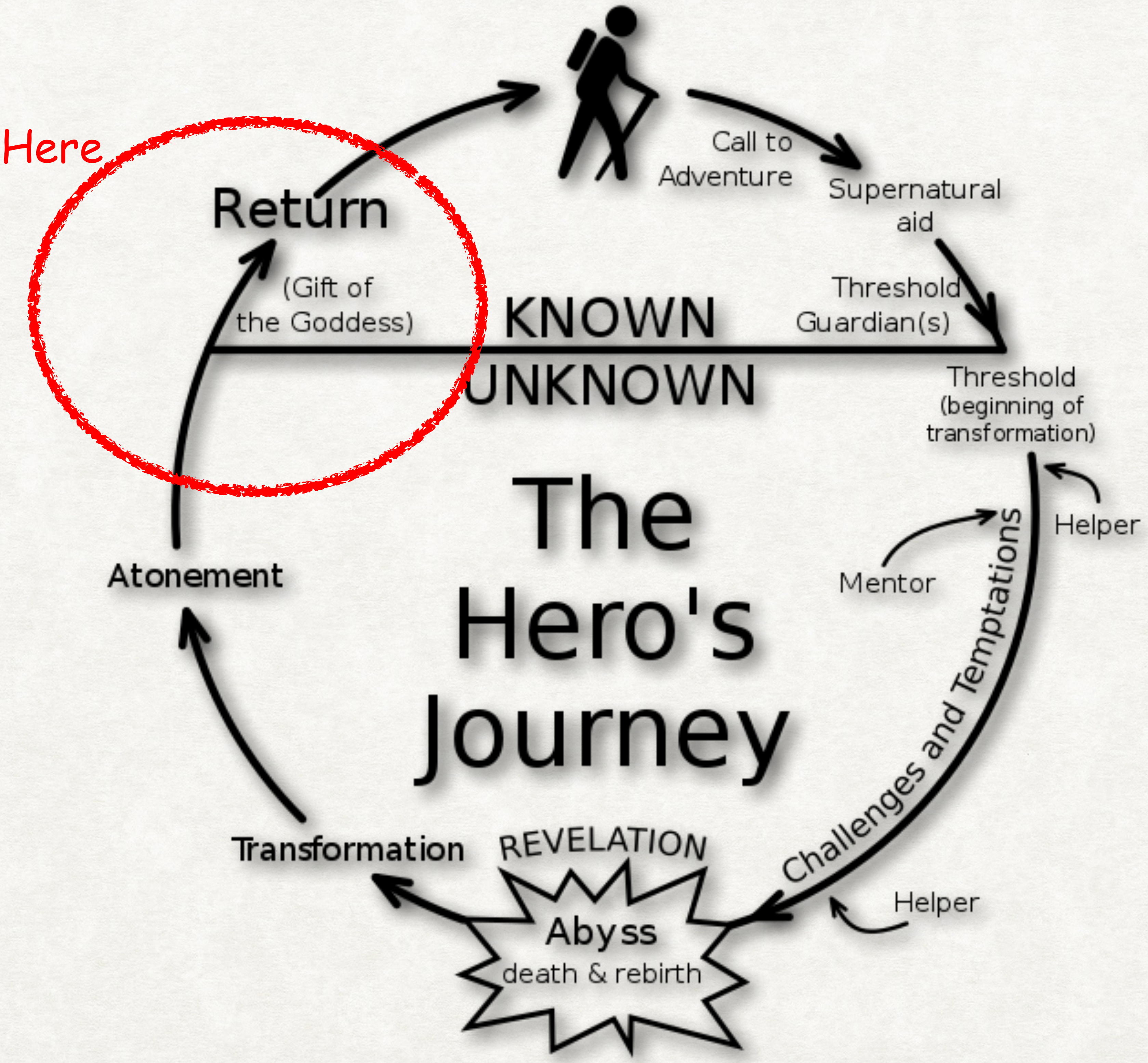
PDF OUTPUT

- For the US Navy, the first version output to PDF
- We had a request to perform similar work for the Republic of Korea Navy (The South Koreans)
- They needed their documentation in Hangul

HTML OUTPUT

- We needed an output that could print…
- …and quickly…

You Are Here



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BLOG MODE

USING CUNEIFORM

BLOG MODE

```
Title: {Story Crafting}
Class: {blog}
Date: {Sat Jul 27 09:31:30 EDT 2019}
Content-Type: {html}
Format: {clay}
date: {Sat Jul 27 09:31:30 EDT 2019}
owner: 619eb03b-0f7d-490f-a2ac-9eb72e4c789d
--- BEGIN CONTENT ---
para {
I've spent the last few weeks learning the finer arts of
[link {https://www.youtube.com/user/lindybeige} Psychology],
[link {https://www.youtube.com/channel/UCFQMO-YL87u-6Rt8hIVsRjA} {Story Telling}],,
and [link {https://www.youtube.com/user/Drachinifel} {Naval History}]
from YouTube. Feel free to judge me.}

para {On one hand, time I could have spent on story lines was spent listening to
talking heads talk about craft. On the other, those hours learning the craft have saved me
man years of effort re-learning what they learned the hard way.
}

para {
The point here is that activity is not progress. I know I can write. I know I can
write a lot in a short amount of time. (At least if this blog is any evidence.)
If I could monetize writing the first three chapters
of a book, I'd be rich. I have had many a brilliant idea devolve into a degenerate mess.
This time around, I knew I had to do something different. I had to actually learn, not
just do.
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USING CUNEIFORM

INDEX ENGINE HEADERS

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Title: {Story Crafting}
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USING CUNEIFORM

CUNEIFORM MARKUP

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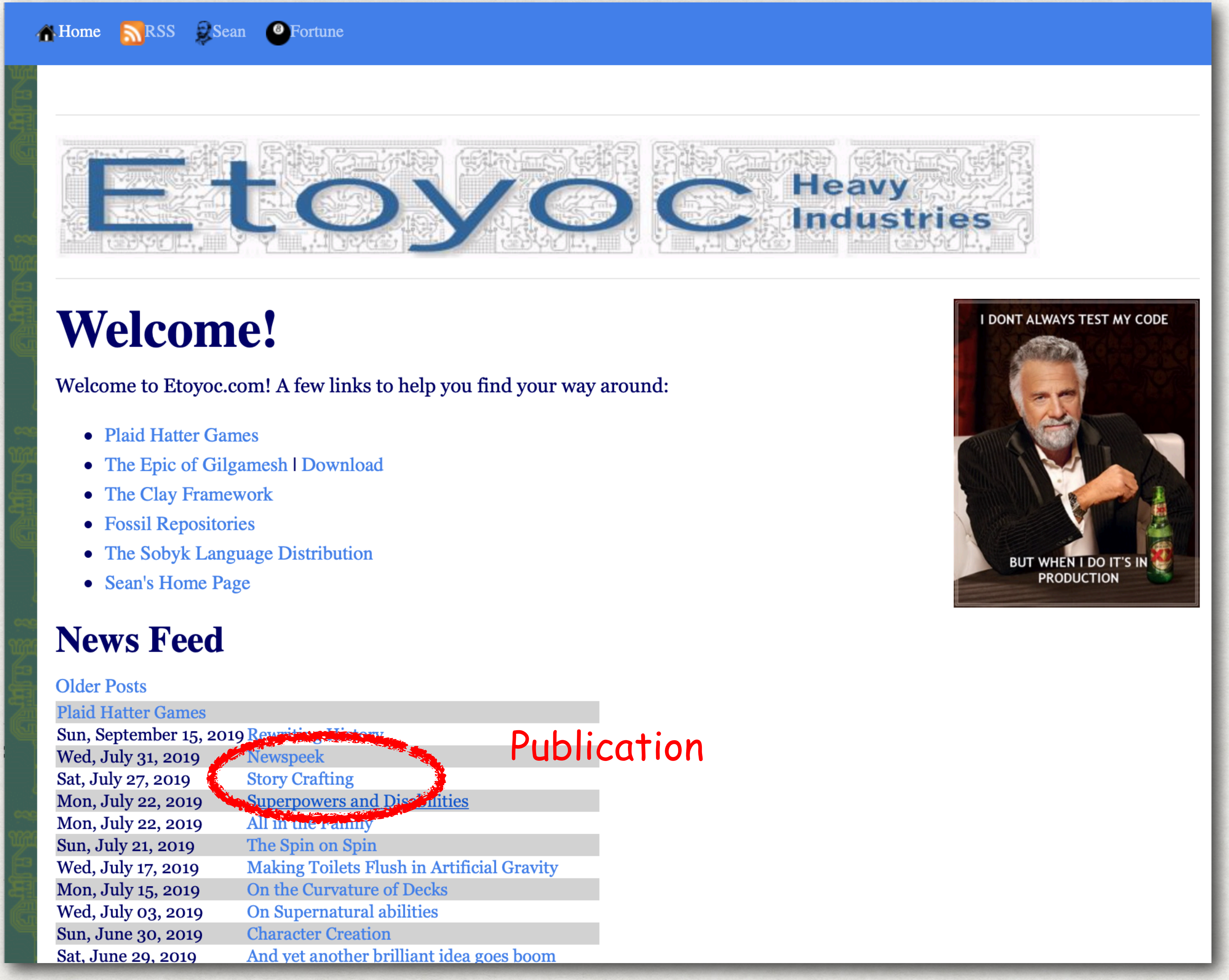


Home RSS Sean Fortune

Welcome!

Welcome to Etoyoc.com! A few links to help you find your way around:

- Plaid Hatter Games
- The Epic of Gilgamesh | Download
- The Clay Framework
- Fossil Repositories
- The Sobyk Language Distribution
- Sean's Home Page

News Feed

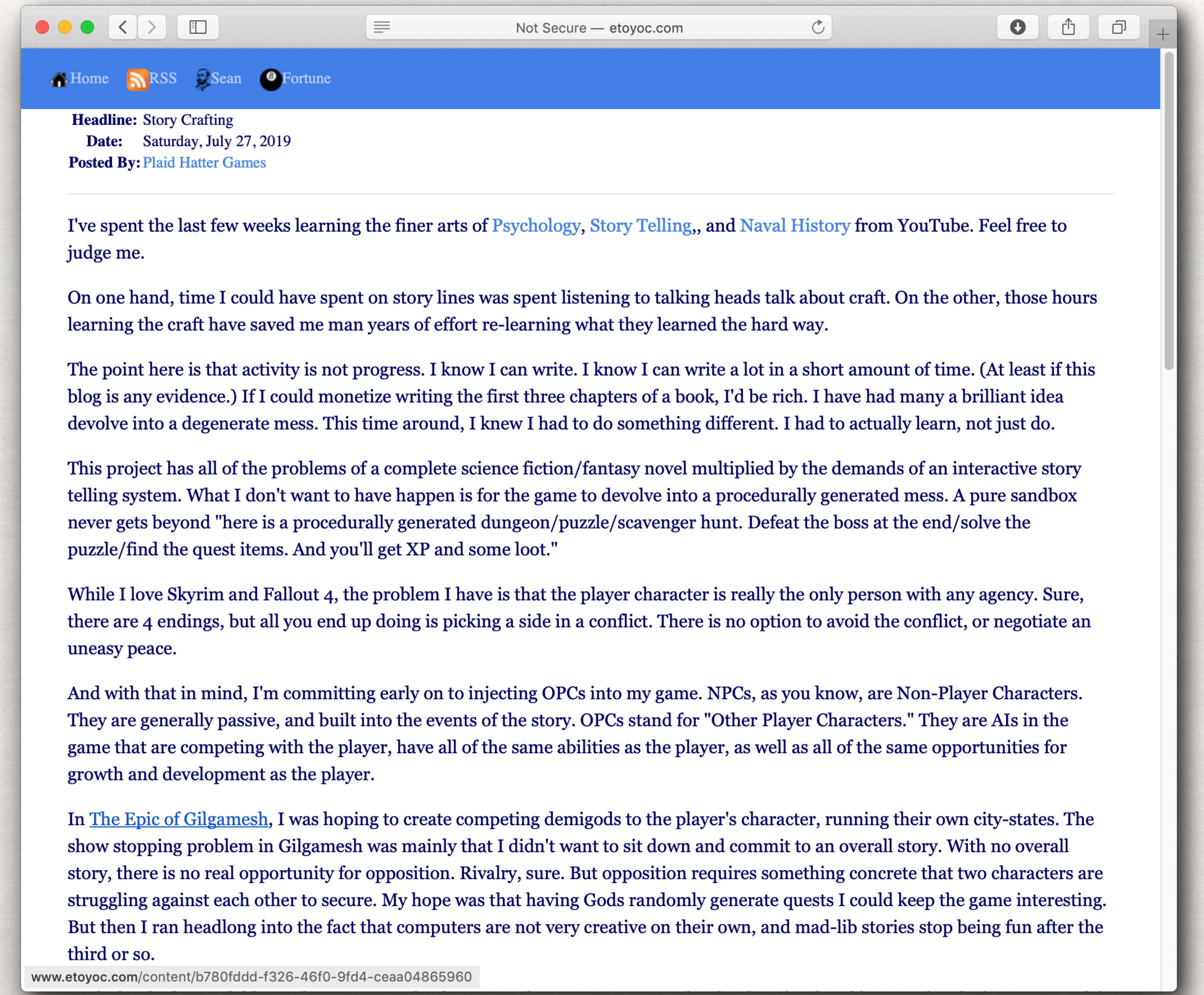
Older Posts

Plaid Hatter Games	
Sun, September 15, 2019	Rewriting History
Wed, July 31, 2019	Newspeek
Sat, July 27, 2019	Story Crafting
Mon, July 22, 2019	Superpowers and Disabilities
Mon, July 22, 2019	All in the Family
Sun, July 21, 2019	The Spin on Spin
Wed, July 17, 2019	Making Toilets Flush in Artificial Gravity
Mon, July 15, 2019	On the Curvature of Decks
Wed, July 03, 2019	On Supernatural abilities
Sun, June 30, 2019	Character Creation
Sat, June 29, 2019	And yet another brilliant idea goes boom

Publication

USING CUNEIFORM

FINAL PRESENTATION



Headline: Story Crafting
Date: Saturday, July 27, 2019
Posted By: Plaid Hatter Games

I've spent the last few weeks learning the finer arts of Psychology, Story Telling,, and Naval History from YouTube. Feel free to judge me.

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This project has all of the problems of a complete science fiction/fantasy novel multiplied by the demands of an interactive story telling system. What I don't want to have happen is for the game to devolve into a procedurally generated mess. A pure sandbox never gets beyond "here is a procedurally generated dungeon/puzzle/scavenger hunt. Defeat the boss at the end/solve the puzzle/find the quest items. And you'll get XP and some loot."

While I love Skyrim and Fallout 4, the problem I have is that the player character is really the only person with any agency. Sure, there are 4 endings, but all you end up doing is picking a side in a conflict. There is no option to avoid the conflict, or negotiate an uneasy peace.

And with that in mind, I'm committing early on to injecting OPCs into my game. NPCs, as you know, are Non-Player Characters. They are generally passive, and built into the events of the story. OPCs stand for "Other Player Characters." They are AIs in the game that are competing with the player, have all of the same abilities as the player, as well as all of the same opportunities for growth and development as the player.

In The Epic of Gilgamesh, I was hoping to create competing demigods to the player's character, running their own city-states. The show stopping problem in Gilgamesh was mainly that I didn't want to sit down and commit to an overall story. With no overall story, there is no real opportunity for opposition. Rivalry, sure. But opposition requires something concrete that two characters are struggling against each other to secure. My hope was that having Gods randomly generate quests I could keep the game interesting. But then I ran headlong into the fact that computers are not very creative on their own, and mad-lib stories stop being fun after the third or so.

www.etoyoc.com/content/b780fddd-f326-46f0-9fd4-ceaa04865960

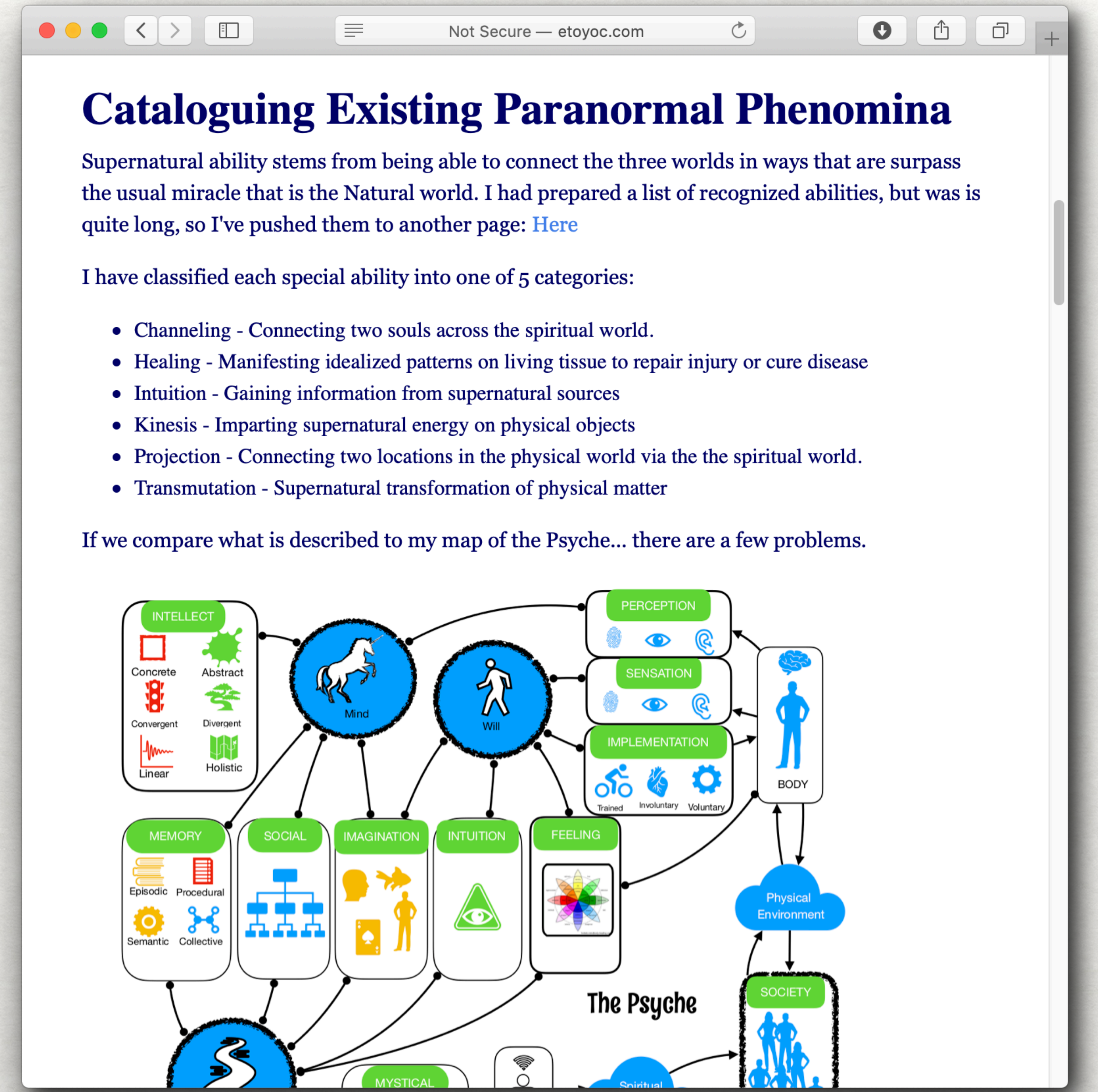
USING CUNEIFORM

PUBLICATION CYCLE

- Author edits files as a local text file
- File is tagged with a UUID, and saved in a local copy of the website
- File system is synchronized via Rsync
- Thread on the server:
  - detects the new or modified file
  - Scans headers, indexes data in Sqlite
- Webserver produces final format on demand

USING CUNEIFORM

COMPLEX LAYOUT


Not Secure — etoyoc.com

Cataloguing Existing Paranormal Phenomina

Supernatural ability stems from being able to connect the three worlds in ways that are surpass the usual miracle that is the Natural world. I had prepared a list of recognized abilities, but was is quite long, so I've pushed them to another page: Here

I have classified each special ability into one of 5 categories:

- Channeling - Connecting two souls across the spiritual world.
- Healing - Manifesting idealized patterns on living tissue to repair injury or cure disease
- Intuition - Gaining information from supernatural sources
- Kinesis - Imparting supernatural energy on physical objects
- Projection - Connecting two locations in the physical world via the the spiritual world.
- Transmutation - Supernatural transformation of physical matter

If we compare what is described to my map of the Psyche... there are a few problems.

INTELLECT
Concrete
Abstract
Convergent
Divergent
Linear
Holistic
Mind
Will
PERCEPTION
SENSATION
IMPLEMENTATION
Trained
Involuntary
Voluntary
BODY
MEMORY
Episodic
Procedural
Semantic
Collective
SOCIAL
IMAGINATION
INTUITION
FEELING
Physical Environment
The Psyche
SOCIETY
MYSTICAL
Spiritual

USING CUNEIFORM

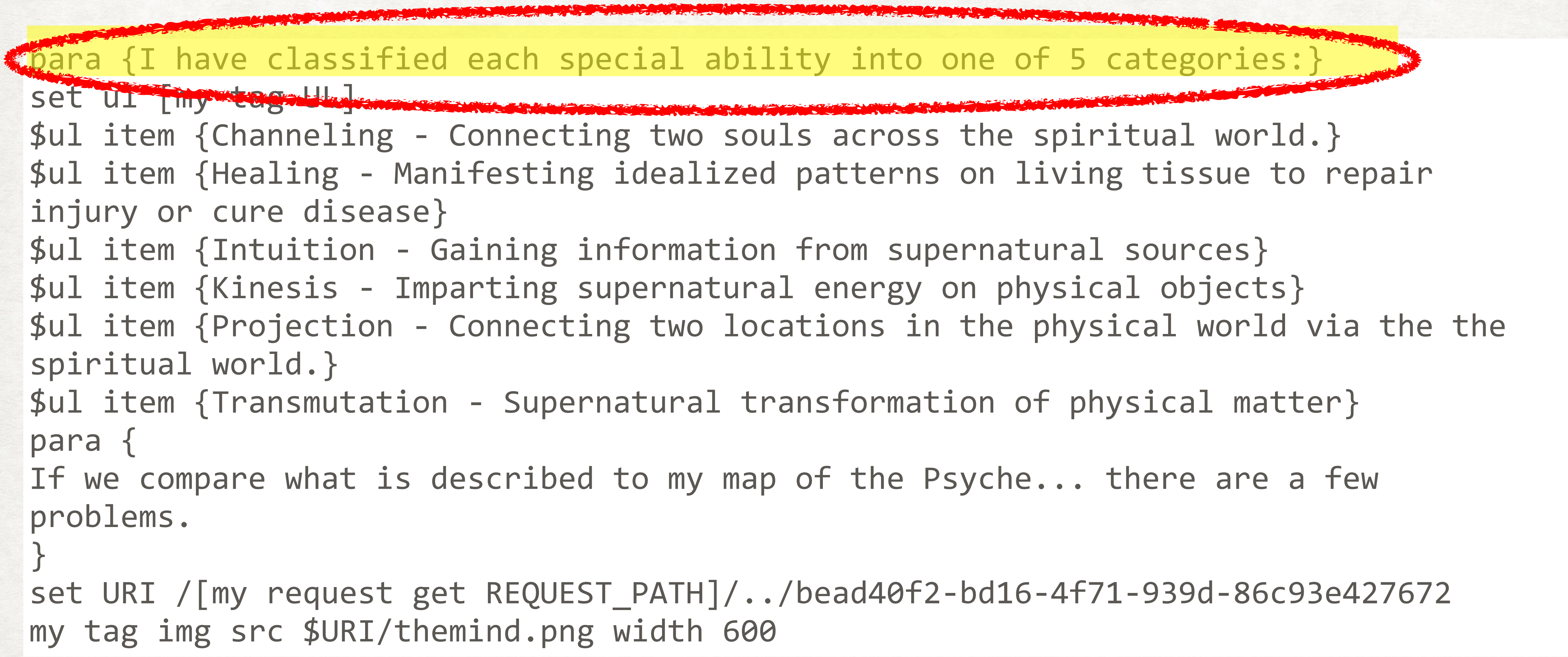
COMPLEX LAYOUT

```
para {I have classified each special ability into one of 5 categories:}
set ul [my tag UL]
$ul item {Channeling - Connecting two souls across the spiritual world.}
$ul item {Healing - Manifesting idealized patterns on living tissue to repair injury or cure disease}
$ul item {Intuition - Gaining information from supernatural sources}
$ul item {Kinesis - Imparting supernatural energy on physical objects}
$ul item {Projection - Connecting two locations in the physical world via the the spiritual world.}
$ul item {Transmutation - Supernatural transformation of physical matter}
para {
If we compare what is described to my map of the Psyche... there are a few problems.
}
set URI /[my request get REQUEST_PATH]/../bead40f2-bd16-4f71-939d-86c93e427672
my tag img src $URI/themind.png width 600
```

USING CUNEIFORM

COMPLEX LAYOUT

Simple commands are procs in the object namespace



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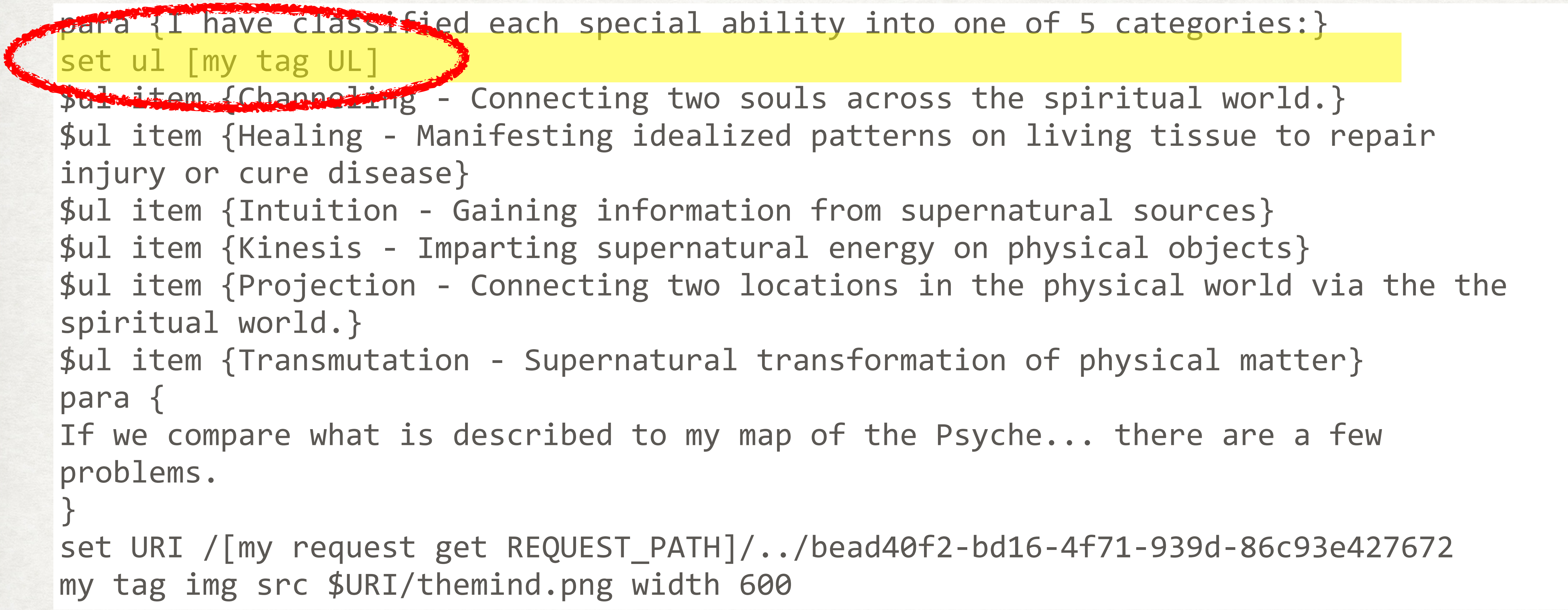
USING CUNEIFORM

COMPLEX LAYOUT

Complex interactions can spawn new children in the Document Object Model



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USING CUNEIFORM

COMPLEX LAYOUT

Spawned Objects can have methods tailored for their role in the layout

```
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When in doubt, you can resort to Tcl

USING CUNEIFORM

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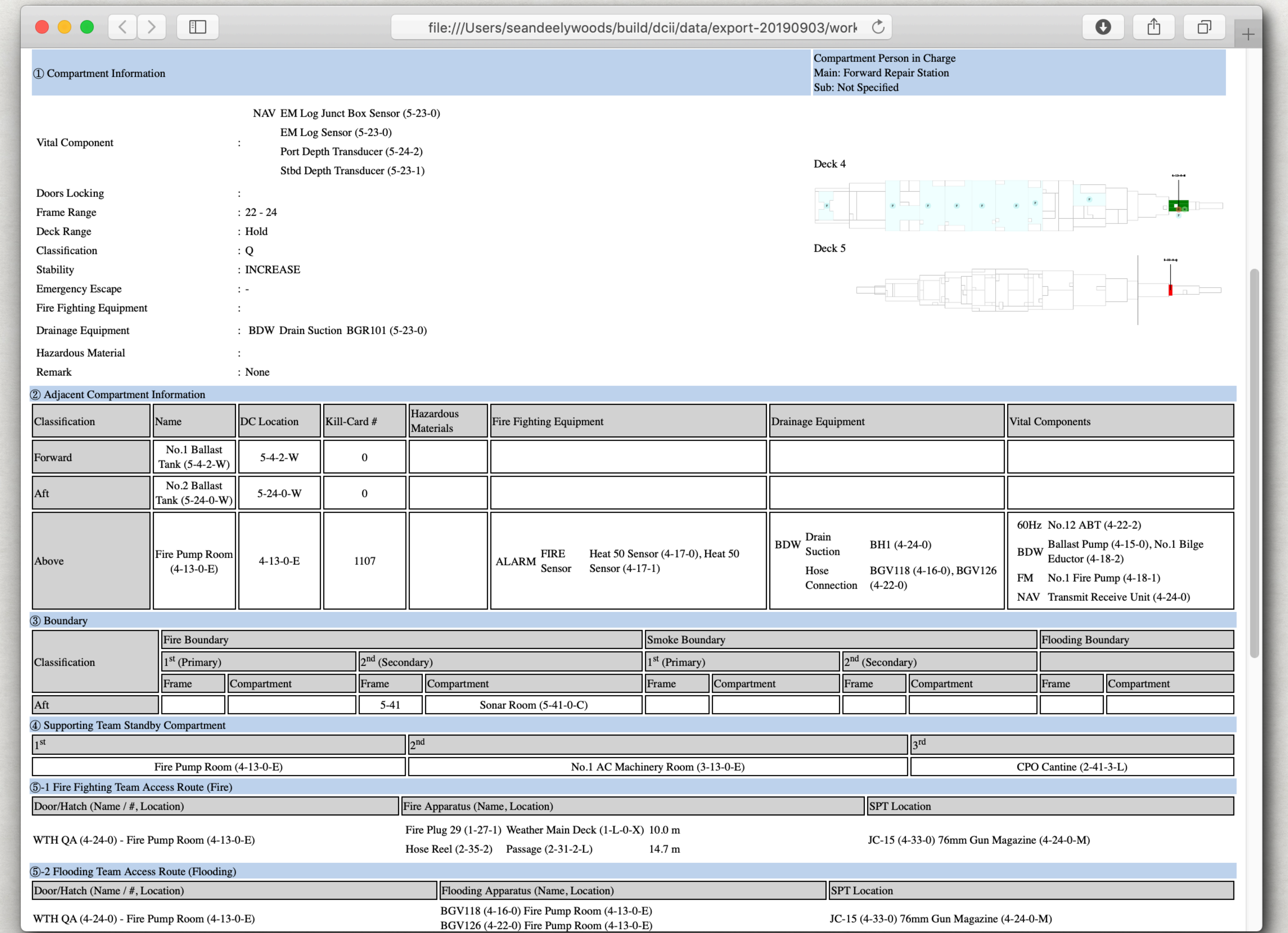
my tag img src $URI/themind.png width 600
```

Tags attributes are populated like Tk options

BATCH DOCUMENT MODE


file:///Users/seandeelywoods/build/dcii/data/export-20190903/work

① Compartment Information

Compartment Person in Charge
Main: Forward Repair Station
Sub: Not Specified

Vital Component : NAV EM Log Junct Box Sensor (5-23-0)
EM Log Sensor (5-23-0)
Port Depth Transducer (5-24-2)
Stbd Depth Transducer (5-23-1)
Doors Locking :
Frame Range : 22 - 24
Deck Range : Hold
Classification : Q
Stability : INCREASE
Emergency Escape : -
Fire Fighting Equipment :
Drainage Equipment : BDW Drain Suction BGR101 (5-23-0)
Hazardous Material :
Remark : None

Deck 4

Deck 5

② Adjacent Compartment Information

Classification	Name	DC Location	Kill-Card #	Hazardous Materials	Fire Fighting Equipment	Drainage Equipment	Vital Components
Forward	No.1 Ballast Tank (5-4-2-W)	5-4-2-W	0				
Aft	No.2 Ballast Tank (5-24-0-W)	5-24-0-W	0				
Above	Fire Pump Room (4-13-0-E)	4-13-0-E	1107		ALARM FIRE Sensor Heat 50 Sensor (4-17-0), Heat 50 Sensor (4-17-1)	BDW Drain Suction BH1 (4-24-0) Hose Connection BGV118 (4-16-0), BGV126 (4-22-0)	60Hz No.12 ABT (4-22-2) BDW Ballast Pump (4-15-0), No.1 Bilge Eductor (4-18-2) FM No.1 Fire Pump (4-18-1) NAV Transmit Receive Unit (4-24-0)

③ Boundary

Classification	Fire Boundary				Smoke Boundary				Flooding Boundary	
	1st (Primary)		2nd (Secondary)		1st (Primary)		2nd (Secondary)			
	Frame	Compartment	Frame	Compartment	Frame	Compartment	Frame	Compartment	Frame	Compartment
Aft			5-41	Sonar Room (5-41-0-C)						

④ Supporting Team Standby Compartment

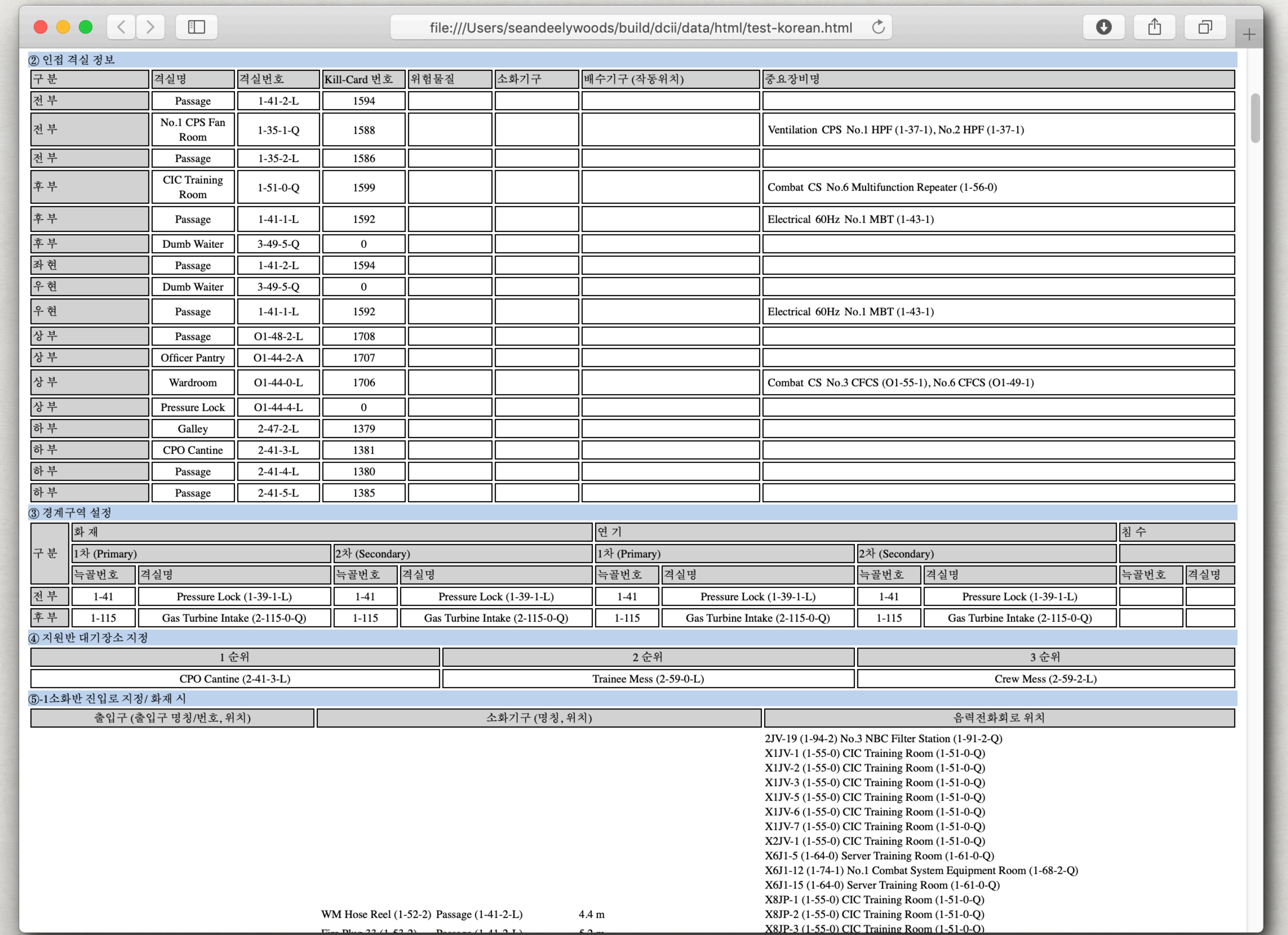
1st	2nd	3rd
Fire Pump Room (4-13-0-E)	No.1 AC Machinery Room (3-13-0-E)	CPO Cantine (2-41-3-L)

⑤-1 Fire Fighting Team Access Route (Fire)

Door/Hatch (Name / #, Location)	Fire Apparatus (Name, Location)	SPT Location
WTH QA (4-24-0) - Fire Pump Room (4-13-0-E)	Fire Plug 29 (1-27-1) Weather Main Deck (1-L-0-X) 10.0 m Hose Reel (2-35-2) Passage (2-31-2-L) 14.7 m	JC-15 (4-33-0) 76mm Gun Magazine (4-24-0-M)

⑤-2 Flooding Team Access Route (Flooding)

Door/Hatch (Name / #, Location)	Flooding Apparatus (Name, Location)	SPT Location
WTH QA (4-24-0) - Fire Pump Room (4-13-0-E)	BGV118 (4-16-0) Fire Pump Room (4-13-0-E) BGV126 (4-22-0) Fire Pump Room (4-13-0-E)	JC-15 (4-33-0) 76mm Gun Magazine (4-24-0-M)


file:///Users/seandeelywoods/build/dcii/data/html/test-korean.html

② 인접 격실 정보

구 분	격실명	격실번호	Kill-Card 번호	위험물질	소화기구	배수기구 (작동위치)	중요장비명
전 부	Passage	1-41-2-L	1594				
전 부	No.1 CPS Fan Room	1-35-1-Q	1588				Ventilation CPS No.1 HPF (1-37-1), No.2 HPF (1-37-1)
전 부	Passage	1-35-2-L	1586				
후 부	CIC Training Room	1-51-0-Q	1599				Combat CS No.6 Multifunction Repeater (1-56-0)
후 부	Passage	1-41-1-L	1592				Electrical 60Hz No.1 MBT (1-43-1)
후 부	Dumb Waiter	3-49-5-Q	0				
좌 현	Passage	1-41-2-L	1594				
우 현	Dumb Waiter	3-49-5-Q	0				
우 현	Passage	1-41-1-L	1592				Electrical 60Hz No.1 MBT (1-43-1)
상 부	Passage	O1-48-2-L	1708				
상 부	Officer Pantry	O1-44-2-A	1707				
상 부	Wardroom	O1-44-0-L	1706				Combat CS No.3 CFCS (O1-55-1), No.6 CFCS (O1-49-1)
상 부	Pressure Lock	O1-44-4-L	0				
하 부	Galley	2-47-2-L	1379				
하 부	CPO Cantine	2-41-3-L	1381				
하 부	Passage	2-41-4-L	1380				
하 부	Passage	2-41-5-L	1385				

③ 경계구역 설정

구 분	화 재				연 기				침 수	
	1차 (Primary)		2차 (Secondary)		1차 (Primary)		2차 (Secondary)			
	늑골번호	격실명	늑골번호	격실명	늑골번호	격실명	늑골번호	격실명	늑골번호	격실명
전 부	1-41	Pressure Lock (1-39-1-L)	1-41	Pressure Lock (1-39-1-L)	1-41	Pressure Lock (1-39-1-L)	1-41	Pressure Lock (1-39-1-L)		
후 부	1-115	Gas Turbine Intake (2-115-0-Q)	1-115	Gas Turbine Intake (2-115-0-Q)	1-115	Gas Turbine Intake (2-115-0-Q)	1-115	Gas Turbine Intake (2-115-0-Q)		

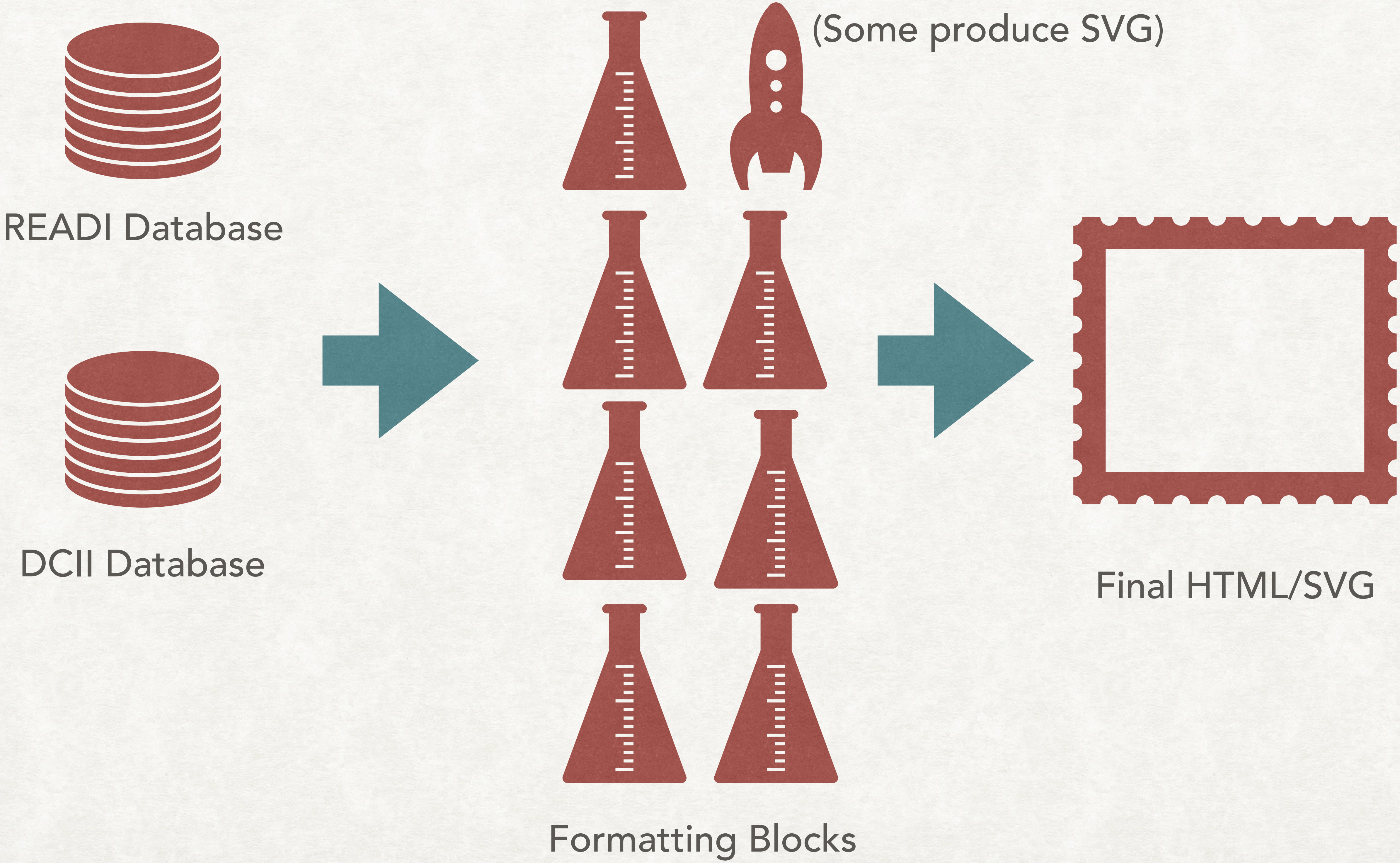
④ 지원반 대기장소 지정

1 순위	2 순위	3 순위
CPO Cantine (2-41-3-L)	Trainee Mess (2-59-0-L)	Crew Mess (2-59-2-L)

⑤-1소화반 진입로 지정/ 화재 시

출입구 (출입구 명칭/번호, 위치)	소화기구 (명칭, 위치)	음력전화회로 위치
	WM Hose Reel (1-52-2) Passage (1-41-2-L) 4.4 m Fire Plug 33 (1-53-2) Passage (1-41-2-L) 5.2 m	2JV-19 (1-94-2) No.3 NBC Filter Station (1-91-2-Q) X1JV-1 (1-55-0) CIC Training Room (1-51-0-Q) X1JV-2 (1-55-0) CIC Training Room (1-51-0-Q) X1JV-3 (1-55-0) CIC Training Room (1-51-0-Q) X1JV-5 (1-55-0) CIC Training Room (1-51-0-Q) X1JV-6 (1-55-0) CIC Training Room (1-51-0-Q) X1JV-7 (1-55-0) CIC Training Room (1-51-0-Q) X2JV-1 (1-55-0) CIC Training Room (1-51-0-Q) X6J1-5 (1-64-0) Server Training Room (1-61-0-Q) X6J1-12 (1-74-1) No.1 Combat System Equipment Room (1-68-2-Q) X6J1-15 (1-64-0) Server Training Room (1-61-0-Q) X8JP-1 (1-55-0) CIC Training Room (1-51-0-Q) X8JP-2 (1-55-0) CIC Training Room (1-51-0-Q) X8JP-3 (1-55-0) CIC Training Room (1-51-0-Q)

BATCH MODE STRUCTURE



READI Database

DCII Database

(Some produce SVG)

Formatting Blocks

Final HTML/SVG

LIVE NAVIGATION MODE