**Exploring Camp X**: Interactive Prototype

December 9, 2022 - Megan Hicks and Danni Hurley

Digital Interactive - <https://www.canva.com/design/DAFQ2fUSq4A/Jn89UC-esCiMnZeeneoCxA/view?utm_content=DAFQ2fUSq4A&utm_campaign=designshare&utm_medium=link&utm_source=publishpresent>

**Welcome to Camp X**

Opening Text: You are a new operative at Camp X, a Canadian Spy Camp in Whitby, ON. You have been assigned to the HYDRA, telecommunications station. Today, you will explore Camp X and learn how to decode important messages.

This interactive seeks to commemorate, to educate and to build public memory for the historic site of Camp X, a World War II intelligence and communications station located in Whitby, Ontario. It will take visitors through Camp X, test their hand at decoding a cipher, and teach them the history behind the infamous Spy Camp. The interactive will also show the visitor pop culture references that were inspired by Camp X and talk about what the site looks like today.

The interactive would be digital with an audio-guided tour format as well. The interactive will be a touch screen, allowing visitors to practice decoding the ciphers digitally by touching the letters and dragging them to where they think they go. This allows the visitor to actively engage with the display and the history-making an essential component to creating a more immersive experience. This display could be engaged alone or in a group if visitors wanted to talk about how to decode the messages. Additionally, the interactive would also include analog buttons for a sensory experience if visitors prefer that option over the touch screen. Braille would also be accessible in a binder format detailing the interactive and allowing the low vision and blind community to come together and solve a cipher.

Content will be shaped by partnerships, such as the Intrepid Society, the Memory Project, the Communications Security Establishment and Lynn Philip Hodgson, Camp X historian. This interactive seeks to share the voices and memories of those who served at Camp X. And provide an authentic experience of Camp X. The interactive will be located next to the Enigma Machine, to begin a conversation on Canadian intelligence work.

**Design**

This interactive is designed to highlight the colours, sounds, and aesthetic elements that give the visitor an immersive experience. It was all an intentional choice to include these aspects.

Sound: We have included a telegraph machine soundscape to add to the feel of decoding messages. For the prototype, the soundscape plays for 70 secs. However, the soundscape in the final product will play on a loop.

Colours: This exhibit follows the War Museum colour pallet and gives it an old fashion feel.

Aesthetic Feel: Used ripped-up paper to show the secrecy of the decoding process and how the messages might have been ripped-up after decoding.

**Operational Instructions**

Main Content:

* The green arrow button on the screen directs the visitor to the next slide for each screen.

Famous Authors Screen:

* Users will attempt to answer the question.
* If Ian Fleming or Roald Dahl are selected, the screen detailed their involvement will appear. And the other screen will follow.
* If Tom Clancy or John Le Carré are selected, then the names will be crossed out.

Decode D-Day Message (Cipher Key):

* Use the Cipher Key to decode the message
	+ The top line is the plain text alphabet.
	+ The bottom line is the ciphertext alphabet.
* Find the corresponding decoded letter that is above the encoded letter.
* Click and drag the corresponding letter to the space to complete the puzzle.

Decode the Name (Cipher Key):

* Use the Cipher Key to decode the message
	+ The top line is the plain text alphabet.
	+ The bottom line is the ciphertext alphabet.
* Find the corresponding decoded letter that is above the encoded letter.
* Click and drag the corresponding letter to the space to complete the puzzle.

**Message**

The main narrative of this interactive is to commemorate, to educate and to build public memory about Camp X since it is an often-overlooked site and not currently discussed at the War Museum. It does this by putting the visitor in the shoes of a new operative that needs to learn about the camp and learns how to decode a message. The hope is for visitors to come away with a deeper understanding of this vital intelligence hub connecting the United Kingdom, Canada and the United States during WWII. Camp X was an essential part of Canadian identity, it helped to protect secrets and served as a precursor to the Communications Security Establishment.

**Audience**

Primary Audience: Families, Veterans, Camp X Historical Society

We hope to attract a wide range of audiences, but since the Camp is not well known, it might take a while for it to catch on. Regardless, the interactive offers an entertaining narrative surrounding the forgotten camp and an interactive element of decoding a message that hopefully will be appealing to a wide variety of audiences.

**Accessibility**

The interactive will feature analogue buttons to allow the visitor to switch between English and French and then to be able to move around the interactive if they do not want to use the digital interface. The screen will also be able to accommodate different vision needs and can be adjusted for colour, contrast, and text enlargement. The buttons would be green to have more visibility.

The interactive would have braille above the buttons, and text below signalling what the buttons are/do. The interactive would also have a corresponding binder of the full braille text and large font write-ups of the interactive screens. The interactive itself also allows for the contrast to be changed to high or low depending on the visitor’s needs as well as options to enlarge the text. Preliminary Alt text is currently being tested and requires further alterations based on accessibility consultation.

The visitor would simply have to tap on the arrow icon to advance the interactive. If at any time the visitor wants to leave the game, they simply have to select the home screen button and it will take them to the start of the interactive. The interactive will also include sound which can be adjusted for volume.

This would also be at the appropriate height to accommodate wheelchair access, children, and all mobility needs.

A**V and IT REQUIREMENTS:**

Large Digital Touch Tabletop

Headphones for audio-guided immersion

Analogue buttons and braille under the buttons

After 2 minutes of inactivity, the interactive will return to the first screen.

For the decoding game, users need to be able to click and drag the letters to the correct space.

**Evaluation & Testing Results**

1. We are still working/thinking about how to do this. Do you think this coding/deciphering is a good game/interactive to incorporate into this? What do you think would be the best option?

**Tester Responses:** They liked the cipher game and recommended we include a completed one as an example so visitors would understand what it is supposed to look like once completed.

1. What did you learn? Did you like it?

**Tester Responses:** Learned that there were in fact, women in Camp X decoding the messages. Some people didn’t know about Camp X so the whole concept was new to them and intriguing. The overall consensus was that they enjoyed the interactive and learned a great deal by going through it. The class also enjoyed the professional look and feel of the interactive and liked the images included and the aesthetic.

1. Are any components too difficult or easy? Was it accessible? Do you have any concerns?

**Tester Responses:** Did not think the cipher was too difficult just thought we should include a completed one for reference. Thought it was accessible and interesting.

1. What was your favourite part of the interactive?

**Tester Responses:** The class liked the feel of the interactive, they enjoyed feeling like they were in a spy movie themselves. Thought again that it was very professional looking and enjoyed the secrecy of it.

Other Feedback:

**Marina:** beautiful graphics

**Chantel:** looks like something actually published by a museum

**Jackie:** looks terrific

**Anna:** Liked that it was not gendered used the expression such as “those who” “officers” and then the fact that we present an image of a woman

**Renée:** super cool! Kinda like the CIA Spy Museum

**Marina:** smooth sailing...loved the theme, approach & content would love to see it in a museum

**Nicholas:** loved the look of your interactive, very professional looking

**Alexa:** can’t wait to (hopefully) see it at the War Museum

**Emma:** loved the idea since she grew up near the site

**Holly:** loved it too and actually watched the CBC tv show X Company a few times and was not familiar with women being involved so liked that aspect very much

**Bibliography**

Communications Security Establishment. (2021) “Episode 2: Hydra and Rockex” [video] <https://cse-cst.gc.ca/en/information-and-resources/artifacts/episode-2-hydra-and-rockex>

Communications Security Establishment. (2022) “CSE 75 – Vignettes". <https://www.cse-cst.gc.ca/en/culture-and-community/history/75th-anniversary/cse-75-vignettes>

Crypto Museum. (2022) “Rockex: One-time Tape cipher machine.” Crypto Museum. <https://www.cryptomuseum.com/crypto/uk/rockex/index.htm>

Hodgson, Lynn Philip. (1999a) “Camp- X Hydra.” *Camp X*. <http://www.camp-x.com/hydra.html>

Hodgson, Lynn Philip. (1999b) “Camp X Official Site.” *Camp X.* <http://www.camp-x.com/camp-x.html>

Stafford, David. (2018) "Camp X". *The Canadian Encyclopedia*, *Historica Canada*. [www.thecanadianencyclopedia.ca/en/article/camp-x](http://www.thecanadianencyclopedia.ca/en/article/camp-x).

**Appendix 1 – Interactive Script**

1. **Main Menu**

Welcome to Camp X!

After passing a series of interviews, you are ready to be trained as an operative at Camp X, the secret spy camp in Whitby, Ontario. You have been specially assigned to HYDRA, the telecommunications station. Today, you will explore Camp X. And learn how to decode important messages. Let's begin!

1. **Camp X**

As you drive into Camp X, you observe the surrounding farmland, the shores of Lake Ontario, and the marshland around Corbett Creek. You step out of your car and head towards the two H-shaped buildings that will be your home. As you walk, you hear the Canadian, British and American accents of the other agents being trained at Camp X.

1. **Hydra**

It is your first day of training at HYDRA. Bill Hardcastle, who built the relay station in May 1942, is going to be showing you around. Hydra relays messages between the United Kingdom, the United States, and Canada. It also houses a Rockex Cipher Machine, designed by Benjamin deForest Bayly, which decrypted messages. The backbone of Hydra is the Rhombic Antennae. And the geographic location of Camp X is ideal for sending and receiving messages.

1. **Inside Hydra**

You step into the teletype room and Evelyn Davis turns from her typewriter to greet you.

"Welcome to Camp X! We are sending and receiving traffic to England and New York and Washington,” Evelyn says. Later you would discover that some of the messages were being sent to the famous Bletchley Park, the site of code-breaking in the United Kingdom.

Evelyn is one of the many women of the Canadian Women’s Army Corps, who were stationed at Camp X. They were instrumental to the work of Camp X.

1. **Codes & Ciphers**

Evelyn shows you how the messages are in five-letter groups and never written in plain English. You remember your training about how to decrypt the Rockex cipher.

In your training, you became highly skilled in Morse and Murray Code. You also had to memorize different code words. For example, if you saw a message with 'OU', you knew that it needed to be relayed urgently because it signified a top-priority message.

1. **Decode D-day message**

On June 6th, 1944, you are working in HYDRA. Suddenly, Bill Hardcastle yells…."Hey boys, I think this is it! I think the invasion has started!". A stream of top-priority messages is coming in. Decode the message by using the cipher key. You need to substitute the letter from the bottom row with the letter from the top row.

You clipped your notes from training to the top to remind yourself.

1. **Decode the Name**

To get some extra practice, you are handed the following cipher. Can you decode the message to reveal one of your fellow Camp X colleagues? Substitute the letter from the bottom row with the letter from the top row.

1. **Camp X remembered**

You transition out of Camp X was the war comes to an end. You heard that the RCMP and the Royal Canadians Corps of Signals later used it. You heard whispers about Igor Gounzenko, the Russian cipher clerk who defected, being interviewed at Camp X during the Cold War. It was closed in 1969 and the buildings were removed.

Now, you walk along the waterfront trail in Intrepid Park, named after Sir William Stephenson. And visit the memorial that reminds you of your friends and colleagues, who secretly served.

1. **Pop Culture**

You want others to remember Camp X, so you recommend Eric Walters' children's books series, about a group of boys who stumble across Camp X. Or the CBC tv show X Company which attempts to recreate the secret activities of Allied agents.

1. **Famous Authors**

You remember that 2 famous authors were connected with Camp X. Who were they again?

1. **Ian Fleming**

Oh yes! Sir Ian Fleming, the author of the James Bond Series. And a British Intelligence Officer himself. You can't be sure if he visited Camp X, but you had heard that Sir William Stephenson was his inspiration for James Bond. Sir Stephenson was the director of the British Security Coordination and the founder of Camp X.

1. **Roald Dahl**

And the other one was... Roald Dahl, who wrote BFG, Matilda, and Charlie and the Chocolate Factory. He was a British Intelligence Officer, who was trained at Camp X. You remember him working for the British Security Coordination, located in New York City.

1. **Hydra Today**

You hope that the memory of Camp X will continue. And you remember how the Communication Security Establishment continues the work that began at HYDRA.

1. **Thank you to our partners!**