

# Navajo Code Talkers

---

Amélie Risi & Eric Sageloli

4 avril 2018

# Introduction

---

# How to secretly send a message ?

- Steganography

# How to secretly send a message ?

- Steganography
- Cryptography

# How to secretly send a message ?

- Steganography
- Cryptography

But also..

- Translation of the message into an obscure language



# Code talkers appeared in the first half of 20th century

Meeting of two conditions :

- The existence of the radio and the phone
- By that time, most of the cipher machines were too slow and fragile to be used for tactical field communications



**Figure 1** – The SIGABA

Plan :

- Relation between the Navajos and the US in the late of the 19th century
- How Navajo code talkers have been recruited
- Study of the Navajo code
- Recognition and current situation of the Navajos

# Navajos and US in the late of the 19th century

---

But

- The long walk
- Boarding schools



# The long walk

In 1864 :

- Deportation of approximately 8000 Navajo people by the government of the United States of America
- Forced trek over 480km into the Bosque Redondo camp

# The long walk

In 1864 :

- Deportation of approximately 8000 Navajo people by the government of the United States of America
- Forced trek over 480km into the Bosque Redondo camp

They were not informed of :

- Where they were going
- Why they were being relocated
- How long it would take to get there

# The long walk

In 1864 :

- Deportation of approximately 8000 Navajo people by the government of the United States of America
- Forced trek over 480km into the Bosque Redondo camp

They were not informed of :

- Where they were going
  - Why they were being relocated
  - How long it would take to get there
- 
- The journey lasted 18 days
  - Nearly 2000 Navajos died

# Boarding schools

around 1900 : many American Indian children were in church-operated boarding schools



They were forced to

- Speak in English
- Give up their traditional clothing
- Drop their native names
- Become Christian

# Navajos as code talkers : how they have been recruited

---

- Preliminary : the code talkers during the WWI
- Pacific war and the idea of Philip Johnston
- The demonstration
- Efficiency of the Navajo code talkers

## Preliminary : the code talkers during the WWI

- First use of native American code talkers : Cherokee

September 1918 : During the Second Battle of the Somme, They helped to win the battle

## Preliminary : the code talkers during the WWI

- First use of native American code talkers : Cherokee

September 1918 : During the Second Battle of the Somme, They helped to win the battle

- Reaction of Germany



# Pacific war and the idea of Philip Johnston

Philip Johnston



- 1942 : he proposed to the Marine Corps that Navajos and other tribes could be recruited as code talkers
- The major general Clayton Barney Vogel accepted to try the idea

# The demonstration

Johnston recruited four bilingual Navajos and they went to Camp Elliott for a demonstration.

- Two of the Navajos translated in Navajo typical military field orders and sent it by radio to their companions
- The companions translated the message in English

Example,

*"Enemy expected to make tank and dive bomber attack  
at dawn."*

becomes...

Example,

*"Enemy expected to make tank and dive bomber attack at dawn."*

becomes...

*"Enemy tank dive bomber expected to attack this morning."*

Example,

*"Enemy expected to make tank and dive bomber attack at dawn."*

becomes...

*"Enemy tank dive bomber expected to attack this morning."*

Translation was done in 20 second instead of the 30 minutes needed by machines at that time.

- May 1942 : 29 Navajo code talkers are recruited
- Altogether, between 375 to 420 Navajos participated to the program.

# Navajo and Navajo code

---

- Why the Navajo language was a good choice
- How it works
- Evolution of the code
- Some flaws of the code
- Efficiency of the Navajo code talkers

## Why the Navajo language was a good choice?

- The largest population of Native American



## Why the Navajo language was a good choice?

- The largest population of Native American
- It remained mostly "unwritten"

## Why the Navajo language was a good choice?

- The largest population of Native American
- It remained mostly "unwritten"
- Complex grammar

## Why the Navajo language was a good choice?

- The largest population of Native American
- It remained mostly "unwritten"
- Complex grammar
- Imposture aren't easy to make

## How it works

Because of a lack of military terms, a code was needed.

# How it works

Because of a lack of military terms, a code was needed.

- Dictionary for common military words



NAVAJO CODES NAME OF SHIPS		
SHIPS	TOH-DINEH-IH	SEA FORCE
BATTLESHIP	LO-TSO	WHALE
AIRCRAFT	TSIDI-MOFFA-YE-HI	BIRD CARRIER
SUBMARINE	BESH-LO	IRON FISH
MINE SWEEPER	CHA	BEAVER
DESTROYER	CA-LO	SHARK
TRANSPORT	DINEH-NAY-YE-HI	MAN CARRIER
CRUISER	LO-TSO-YAZZIE	SMALL WHALE
MOSQUITO BOAT	TSE-E	MOSQUITO

<https://www.cia.gov/news-information/featured-story-archive/2008-featured-story-archive/navajo-code-talkers/>

# How it works

- A phonetic alphabet table

A	Ant	WOL-LA-CHEE
B	Badger	NA-HASH-CHID
C	Cat	MOASI
D	Devil	CHINDI
E	Ear	AH-JAH
F	Fox	MA-E

**Figure 2** – correspondance for some letters

<https://www.cia.gov/news-information/featured-story-archive/2008-featured-story-archive/navajo-code-talkers/>

# Evolution of the code

- The original dictionary of 211 terms has been progressively expanded to 411
- Multiple words to spell one letter

A	Ant	WOL-LA-CHEE
A	Apple	BE-LA-SANA
A	Axe	TSE-NILL

**Figure 3** – multiple correspondances for one letter

<https://www.cia.gov/news-information/featured-story-archive/2008-featured-story-archive/navajo-code-talkers/>

# Some flaws of the code

Modern standards not respected :

- Non uniqueness of the translations of a message

On the field :



# Some flaws of the code

Modern standards not respected :

- Non uniqueness of the translations of a message
- Kerckhoffs's principles aren't observed

On the field :

# Some flaws of the code

Modern standards not respected :

- Non uniqueness of the translations of a message
- Kerckhoffs's principles aren't observed

On the field :

- Different evolutions of the code appeared

# Some flaws of the code

Modern standards not respected :

- Non uniqueness of the translations of a message
- Kerckhoffs's principles aren't observed

On the field :

- Different evolutions of the code appeared
- Some battalions didn't have code talkers

# Efficiency of the Navajo code talkers

Battle of Iwo Jima (1945) :

- Six Navajo Code Talkers sent more than 800 messages.

*" Were it not for the Navajos, the Marines would never have taken Iwo Jima."*

*Major Howard Connor, signal officer of the Navajos at Iwo Jima*

# Efficiency of the Navajo code talkers

Battle of Iwo Jima (1945) :

- Six Navajo Code Talkers sent more than 800 messages.

*" Were it not for the Navajos, the Marines would never have taken Iwo Jima."*

*Major Howard Connor, signal officer of the Navajos at Iwo Jima*

- The only spoken military code never to have been deciphered.

## Conclusion :

---

- Recognition of Navajo code talkers
- Current situation

# Recognition of Navajo code talkers

Vietnam War : End of the use of Navajo code talkers

- Declassification of the program (1968)

Beginning of recognition of code talkers

- 1982 : Certificate of Recognition
- 2000 : they received medals from the US Congress
- 2008 : signature of the Code talkers recognition

# Current situation

- Poor conditions life
  - Unemployment
  - Health problems
- There is still some lack of respect



[https://warriorpublications.files.wordpress.com/2017/11/trump\\_navajo.jpg?w=604](https://warriorpublications.files.wordpress.com/2017/11/trump_navajo.jpg?w=604)



## Sources used

- <https://www.archives.gov/education/lessons/code-talkers>
- <https://navajocodetalkers.org/>
- <https://www.cia.gov/news-information/featured-story-archive/2008-featured-story-archive/navajo-code-talkers/>
- [https://en.wikipedia.org/wiki/Code\\_talker](https://en.wikipedia.org/wiki/Code_talker)
- <http://www.historynet.com/world-war-ii-navajo-code-talkers.htm>
- [https://www.nytimes.com/2014/06/06/us/chester-nez-dies-at-93-his-native-tongue-helped-to-win-a-war-of-words.html?\\_r=0](https://www.nytimes.com/2014/06/06/us/chester-nez-dies-at-93-his-native-tongue-helped-to-win-a-war-of-words.html?_r=0)

