North Korea: Cyber Power
Understanding Cyber
Understanding Cyber

What do we do in cyberspace?
Understanding Cyber

What do we do in cyberspace?

How can we use cyberspace to pursue political objectives?
Epochs of Society

Agrarian Age

"Know Thy Enemy"
Epochs of Society

Agrarian Age

Industrial Age

"Know Thy Enemy"
Epochs of Society

Agrarian Age

Industrial Age

Information Age

"Know Thy Enemy"
Epochs of Society

Agrarian Age

Industrial Age

Information Age

Firearm

"Know Thy Enemy"
Epochs of Society

Agrarian Age

Firearm

Industrial Age

Mechanized

Information Age

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Information Age

Informationized

"Know Thy Enemy"
EVOLUTION OF US CYBER
Samuel Morse

After Samuel Morse apparently learned of his wife's death too late to attend her funeral, inspiring him to create a new better communications tool. We remember Morse today as inventor of the telegraph.

Morse Code

A telegraph transmits electric pulses. But how do you convert those pulses into words? Samuel Morse devised a code—popularly called an alphabet—that patterns of long or short pulses (dots and dashes) represent letters. Morse code is a form of computer coding: a way of translating information into a form that a machine can process.

Suppose war looked like this: Small numbers of your light, highly mobile forces defeat and compel the surrender of large masses of heavily armed, dug-in enemy forces, with little loss of life on either side.
What Do We Do In Cyberspace?
What Do We Do In Cyberspace?

Communicate
What Do We Do In Cyberspace?

Communicate

What do we communicate...?
"Through the comprehensive implementation of electronic warfare and computer network warfare that is computerized electronic (wangdian) integrated warfare (yiti zhan) one can carry out an overall damage or breakdown of the enemy's information system."

网电一体战
HISTORY OF NORTH KOREAN CYBER

1979
DPRK established its first factory to produce first-generation ICs.

1985-6
DPRK established the PIC (Pyongyang Informatics Centre) and processed 30K chips

1990s
DPRK developed Lab Number 110 (110호 연구소), responsible for hacking, cyber terror, and cyber espionage

2002
Pyongyang opens its first Internet café and opens first e-business center in DPRK
What Do We Do In Cyberspace?

Communicate

What do we communicate...?
How Does North Korea Want To Use Cyber?

Communicate

What do we communicate...?
How Does North Korea Want To Use Cyber?

1. Test Capabilities
2. Deception and Confusion
3. Opportunistic Attacks and Theft
"Hermit Kingdom"
North Korea Cyber Locations

- Beijing: DPRK Embassy
  - Software industry
- Shen-Yang: HQ (Chi BoSan Hotel)
  - DPRK Consulate
- Da-Ryen: "Silicon Valley" in China
  - IT industries
- Ching-Dao: Cyber Attack by ROK IT companies
North Korea
Cyber Locations

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- DPRK Embassy
- Software industry

Shen-Yang
- HQ (Ch’BoSan Hotel)
- DPRK Consulate

Da-Ryen
- Silicon Valley in China
- IT industries

Ching-Dao
- Cyber Attack by ROK IT companies

*not in North Korea!*
Case Studies

2000's  DDOS Attacks ROK
2011   Nonghyup Bank
2011   Korea Univ Email Accounts
2013   DarkSeoul Malware
2014   Sony Pictures
2014   ROK Nuclear Power Plant
2016   IP and Data theft
2017   WannaCry
Wannacry 2017

Your files have been encrypted!

Send $1000 worth of bitcoin to address

Your files will be lost. Time left 48 hours

47:28:19

WANNACRY OUTBREAK
North Korea: Cyber Power