

# How Japan's Approach Towards Cybersecurity has Changed:

## Quantitative Content Analysis of Cybersecurity Strategy from 2013 to 2018

## PIYUSH GHASIYA & Prof. KOJI OKAMURA

ISEE, Kyushu University, Fukuoka, Japan

#### Background

Quantitative Content Analysis helps in obtaining a complete picture and in investigating the features of the data while avoiding the biasness of the researcher.

Moreover, it not only helps in examining the manifest content(visible) but also the latent content (the meaning behind the manifest content) of the text.

#### Aim of the Research

**First,** by statistically analyzing Japan's Cybersecurity strategy, the research would try to show how Japan's approach towards cybersecurity has changed over the year.

**Next,** the researcher will try to analyze whether or not these strategies are effective in making Japanese society safe from the cybersecurity challenges.

#### Method

This research will be using KH Coder for analyzing the text (Japan's Cybersecurity Strategy).

Step 1. Extracting the most frequent words.

**Step 2.** Co-Occurrence Network Analysis of the words with 30 or more frequency.

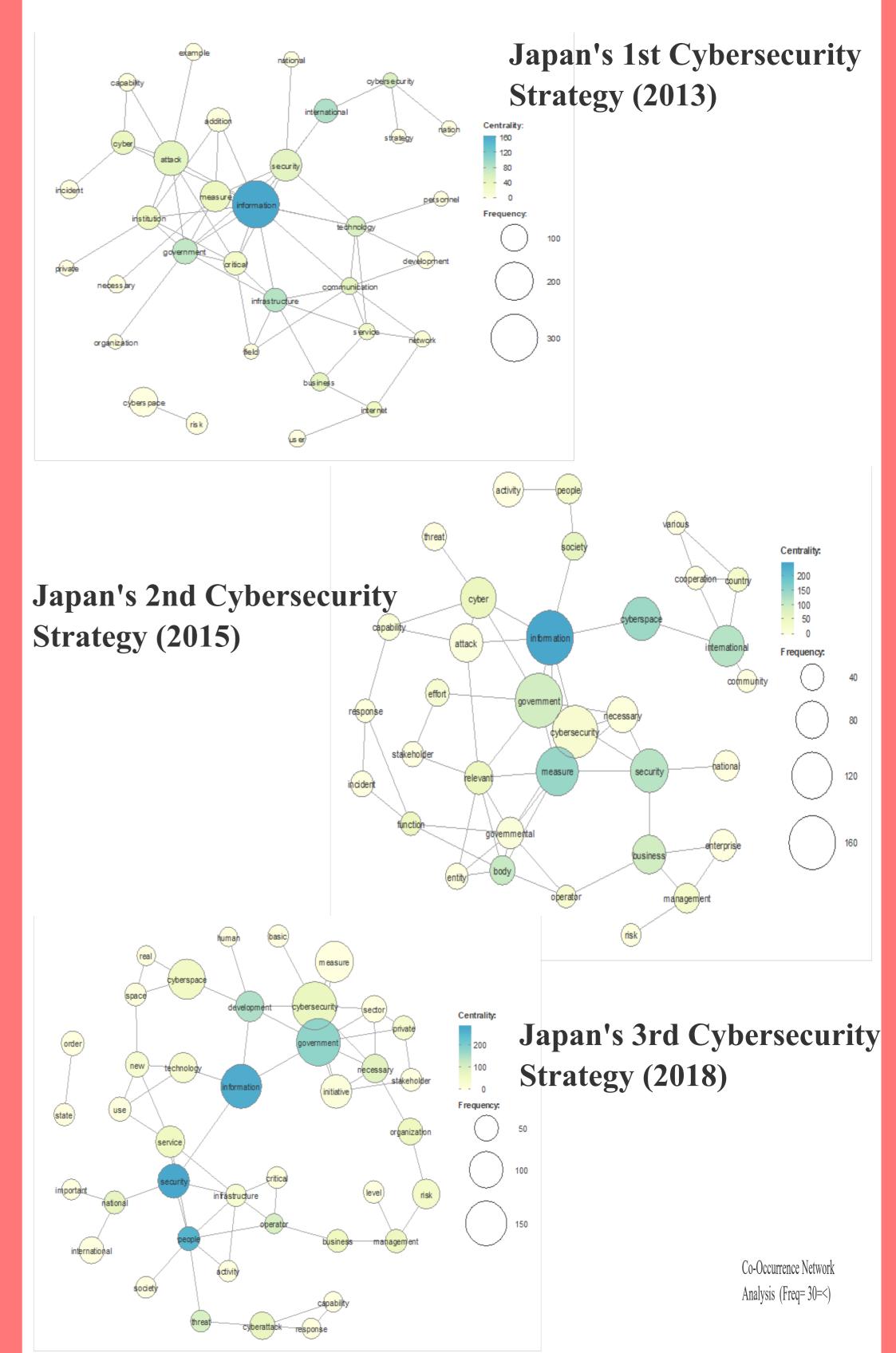
## Term Frequency Analysis

S.No	2013		2015		2018	
	Term	Frequency	Term	Frequency	Term	Frequency
1.	information	304	government	166	cybersecurity	174
2.	attack	165	information	165	government	167
3.	security	142	cybersecurity	153	information	146
4.	measure	132	Japan	146	measure	127
5.	cyberspace	118	measure	132	cyberspace	122
6.	government	90	cyberspace	106	promote	112
7.	cyber	79	security	105	security	89
8.	international	79	include	98	initiative	87
9.	Japan	79	cyber	96	JAPAN	75
10.	addition	78	international	96	service	75
11.	critical	78	business	85	development	73
12.	infrastructure	77	attack	84	technology	71
13.	relate	77	necessary	73	risk	67
14.	institution	76	activity	70	include	63
15.	Security	75	service	66	necessary	63

#### **Presenter's Contact:**

Piyush Ghasiya, PhD Researcher, ISEE, Kyushu University, Fukuoka, Japan E-mail: piyushghasiya@gmail.com

## Co-Occurrence Network Analysis



The Co-Occurrence Network Analysis shows the centrality (significance) of the particular node (concept or word).

It is clear from the analysis of all three documents that though the policymakers adopted the term "Cybersecurity", however it is acctually "Information Security" that occupies their imagination.

#### Resources

- 1. https://www.nisc.go.jp/eng/pdf/cybersecuritystrategy-en.pdf
- 2. http://www.nisc.go.jp/eng/pdf/cs-strategy-en.pdf
- 3. https://www.nisc.go.jp/eng/pdf/cs-senryaku2018-en.pdf
- 4. http://khcoder.net/en/