Australian Government

Department of Defence
Defence Science and Technology Group

A Simple Influence Model

Connections UK 2021

Peter Williams

Land Capability Analysis, DST

Defending Australia and its National Interests
www.defence.gov.au

➢ DAWN Rising 3: 15th-18th June, 2021

➢ An Information Warfare wargame incorporating:

- ▪ Cyber
- ▪ EW
- ▪ Influence
- ▪ Non-combat military
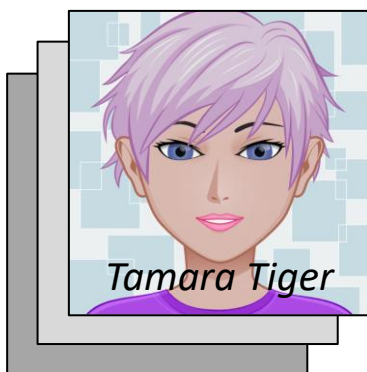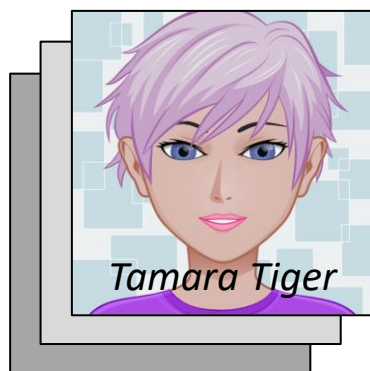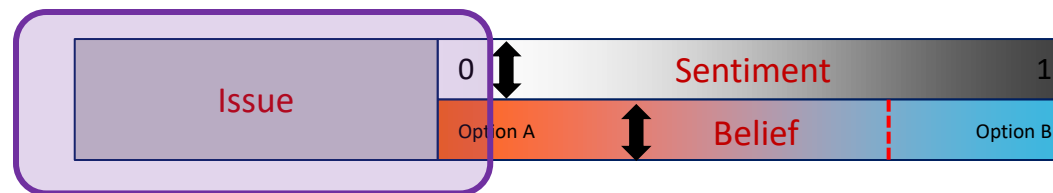
➢ Problem

- Large number of 'soft' entities making decisions continually
- Also wanted to give players access to (partial) information on demand

- Not viable to SME or matrix

North Central

Population centres: cities, territories, provinces

Tamara Tiger

Key Individuals: Government, Industry, Communities

Issue | 0 Sentiment 1

Option A | Belief | Option B

North Central

Tamara Tiger

➢ Political Preference
➢ Attitude towards SIDE 1
➢ Attitude towards SIDE 2

Issue

Sentiment
0   1

Option A   Belief   Option B

North Central

Tamara Tiger
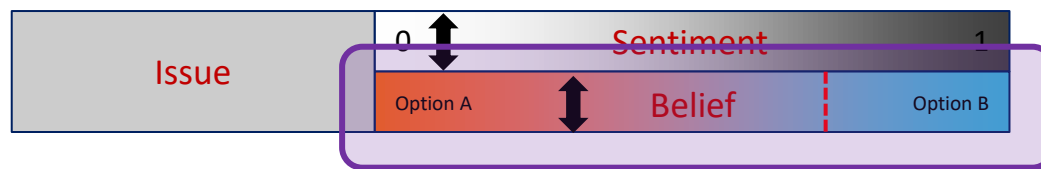
Which side of the Issue you support
0 = For A
1 = For B

Issue

0 Sentiment 1

Option A Belief Option B

North Central

Tamara Tiger
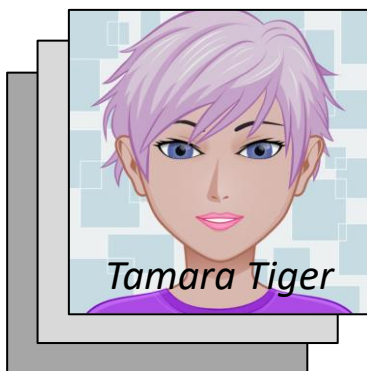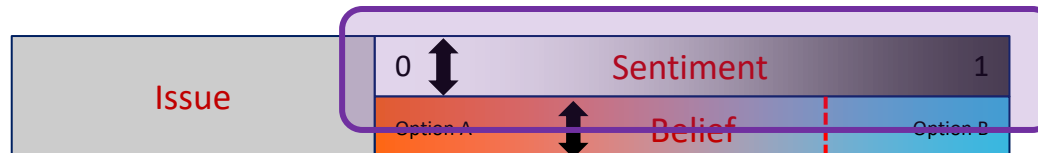
How strongly you care about the Issue
0 = Completely apathetic
1 = Extremely passionate

Issue	0 ↕	Sentiment	1
	Option A ↕	Belief	Option B

North Central

Tamara Tiger
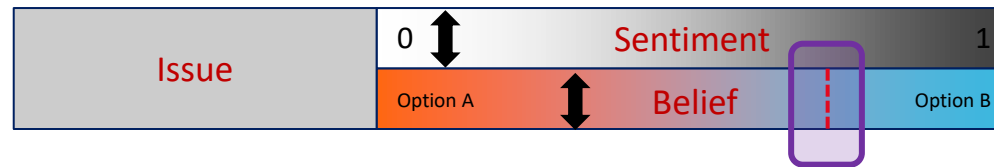
Thresholds were included (but ultimately not used) to determine the outcome of discrete decision points

In-Game Influence Actions

Intelligence ➤
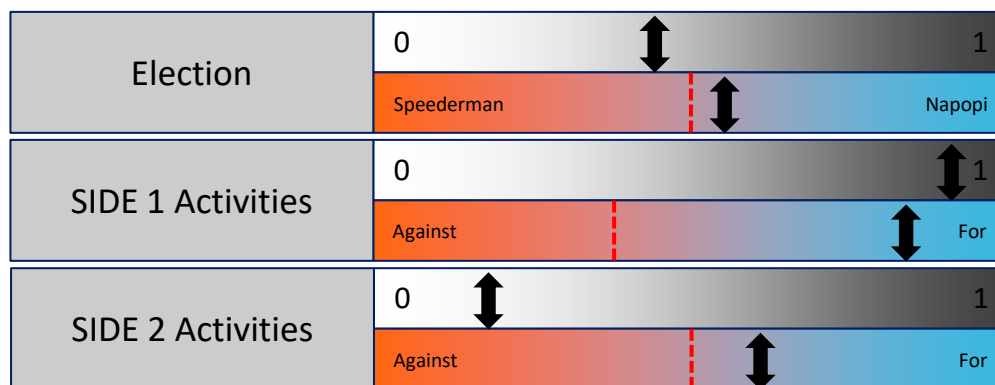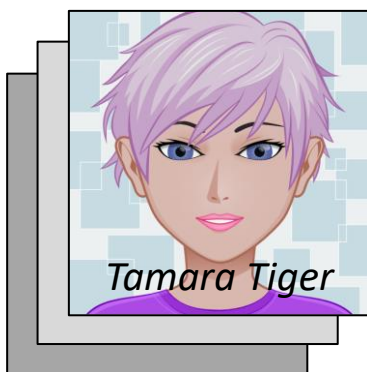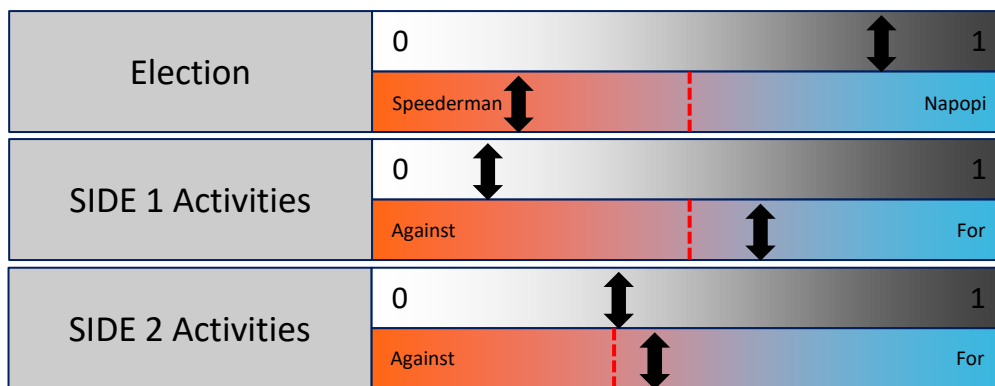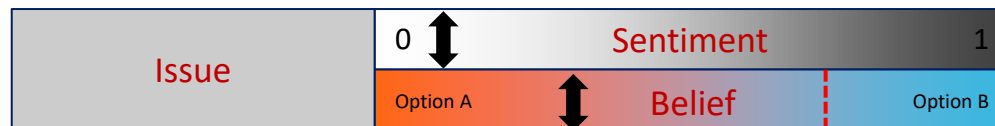
Understand
Sentiments & Beliefs

HUMINT or OSINT*

Gives bonus to
subsequent Shaping Ops

* Two traditional media and
three social media channels

Shaping ➤

Adjust Sentiments

KLE or Cyber/Phishing

Gives bonus to
subsequent Influence

The Sentiment score acts like a
power modifier for Influence
Actions

Influencing ➤

Adjust Beliefs

Persuasion
Manipulation
Coercion

Example Model Data

LocName **North Central** Population **20**

	Vote Sentiment	Vote Preference	SIDE 1 Sentiment	SIDE 1 Preference	SIDE 2 Sentiment	SIDE 2 Preference	50% (50)	PIN (60)	Crocs News (25)	Faceplace (60)	Fleeter (10)	TL;DR (20)
1	0.19	0.83	0.90	0.39	0.07	0.64	1	1				
2	0.58	0.26	0.10	1.00	0.79	0.51				1		
3	0.13	0.23	0.79	1.00	0.19	0.19	1			1		
4	0.02											
5	0.61											1
6	0.37											
7	0.44											1
8	0.41											
9	0.26											
10	0.55										1	
11	0.41										1	
12	0.39											
13	0.19											
14	0.40	0.64	0.37	0.33	0.32	0.46	1			1	1	
15	0.03	0.52	0.67	0.10	0.12	0.41	1			1		
16	0.51	0.49	0.40	0.74	0.65	0.18		1	1	1		
17	0.16	0.76	0.27	0.17	0.22	0.36	1	1				
18	0.18	0.29	0.71	1.00	0.74	0.66						1
19	0.27	0.74	0.29	1.00	0.68	0.71		1	1	1	1	
20	0.42	0.26	0.67	0.41	0.01	0.59	1	1		1		

Thresholds:

		Vote Sentiment (0.5)	Vote Preference	SIDE 1 Sentiment (0.5)	SIDE 1 Preference	SIDE 2 Sentiment (0.5)	SIDE 2 Preference
Pop	**20**	**Vote Sentiment**	**Vote Preference**	**SIDE 1 Sentiment**	**SIDE 1 Preference**	**SIDE 2 Sentiment**	**SIDE 2 Preference**
Ground Truth	1	0.33	0.52	0.51	0.53	0.42	0.44
50% Slice	0.5	0.30	0.50	0.60	0.38	0.28	0.38
PIN	0.6	0.36	0.50	0.54	0.52	0.37	0.42
Crocs News	0.3	0.34	0.69	0.46	0.56	0.55	0.35
Faceplace	0.65	0.33	0.46	0.45	0.52	0.45	0.35
Fleeter	0.15	0.41	0.50	0.48	0.56	0.63	0.55
TL;DR	0.15	0.41	0.65	0.78	0.62	0.55	0.59

➢ Problem

- Large number of 'soft' entities making decisions continually
- Also wanted to give players access to (partial) information on demand

➢ Solution / Mitigation

- Very simple automated system
- Allowed for non-linear manipulation of Influence targets
- Integrated with game rules
- Transparent but also confounding at the same time

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