

Defence OR Symposium



Scenario Development for Information Operations (IO) Experimentation

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Report Documentation Page

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IO Definition (US Doctrine JP3-13)

information operations. Actions taken to affect adversary information and information systems while defending one's own information and information systems.

information. 1. Facts, data, or instructions in any medium or form. 2. The meaning that a human assigns to data by means of the known conventions used in their representation. (Joint Pub 1-02)

information system. The entire infrastructure, organization, personnel, and components that collect, process, store, transmit, display, disseminate, and act on information. (This term and its definition modifies the existing term and definition and is approved for inclusion in the next edition of Joint Pub 1-02.)

Scenario Definition

Scene – from theatrical roots

Situation – within defence context

Perspectives – within a defence and civil seminar context

- ◆ Forecast
- ◆ Stories
- ◆ Pathways

Example Conventional Scenario



JWID 02 - SCENARIO **OVERVIEW**

- **PKO under UN Chapter VII**
 - *Peace enforcement in island country*
 - *Four phase campaign*
 - *CTF operations using Lead Nation concept*
- **Forces must be sourced from outside Pacific theater**
- **Allows the employment of:**
 - *3 Maritime Task forces*
 - *A Division (+) Land Force (One Amphibious Landing Force)*
 - *Air Force (Minimum of three Wings)*
 - *Psyops Task Force*
- **Options to develop HA dimension of the scenario**

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JWID TASK FORCE

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Example C2W Scenario - Abstemia

SCENARIO

1. You are members of a newly formed C2W staff in a 4-Star NATO HQ. Within your AOI is a renegade country called DYSLEXIA, whose government has been making threats to invade and appropriate a region of its neighbouring country, ABSTEMIA, which is on the verge of joining NATO.

2. You have been briefed by your commander to develop an outline C2W plan for use in either **dissuade** the Dyslexian government from attempting to defeat the Dyslexian capabilities or to destroy the Dyslexian capabilities. The lives of NATO forces are to be minimised. In any event, the potential risks to NATO without significant military action.

ways in which you could bring about the desired outcome. **five key elements of C2W**. Each group will present their proposals, which should clearly explain the rationale for their proposal. There is no correct answer, but each response will be discussed.

- Electronic Warfare (EW)
- Psychological Operations (PSYOPS)
- Deception
- Operational Security (OPSEC)
- Destruction

- ### Campaign Planning Process Steps
- C2W Concept
 - Nodal Analysis**
 - Effects/Elements/Tasking
 - Feedback and Battle Damage Assessment (BDA)

Scenario Framework

	Environment	Mission Objectives	Mission
External Factors	Economic/Military	Mission Constraints & Limitations	Military Scope
	Political/Social		Intensity
	Historic Situation	ROE	Tasks
National Security Interests			
Capabilities of Actors	Organisation, Order of Battle, C2, Doctrine, Resources, Lessons Learned		
	Weapons Logistics Skill Morale		
	Friendly Forces Adversary Forces Neutral Forces Non-Combatants		
Environment	Geography/Region/Terrain		
	Climate/Weather		
	(Civil) Infrastructure (e.g. Transportation, Telecommunications, Energy)		

Scenario Framework – Change of Emphasis

External Factors	Environment	<p>Increased contextual build up of History and Current affairs</p>
	Economic/Military	
	Political/Social	
	Historic Situation	
Capabilities of Actors	Organisation, Order of B	<p>Increased focus on social and organisational networks including C2, skill and morale. Reduced emphasis on ORBATS, and weapons.</p>
	Weapons	
	Logistics	
Environment	Skill	
	Morale	
	Friendly Forces Adver	
Environment	Geography/Region/Te	
	Climate/Weather	
	(Civil) Infrastructure (e.g	

Proposed Scenario Framework for IO

The framework is a set of processes and placeholders designed to support the design, development and delivery of wargame or exercise related scenario information.

Principal components of the framework are:

- **Scenario Elements** - Players, Circumstance, Time frame, History
- **Guidance Material** - Definition(s), Examples, Summaries
- **Development Support** - Focus, Design, Integration, Delivery, Application

Scenario Development Support – Focus & Design

Focus : is used to support the integration and construction of a story incorporating the overall needs for an exercise.

Design : is used as a deliberate process to ensure the requirements are expressed in the scenario.

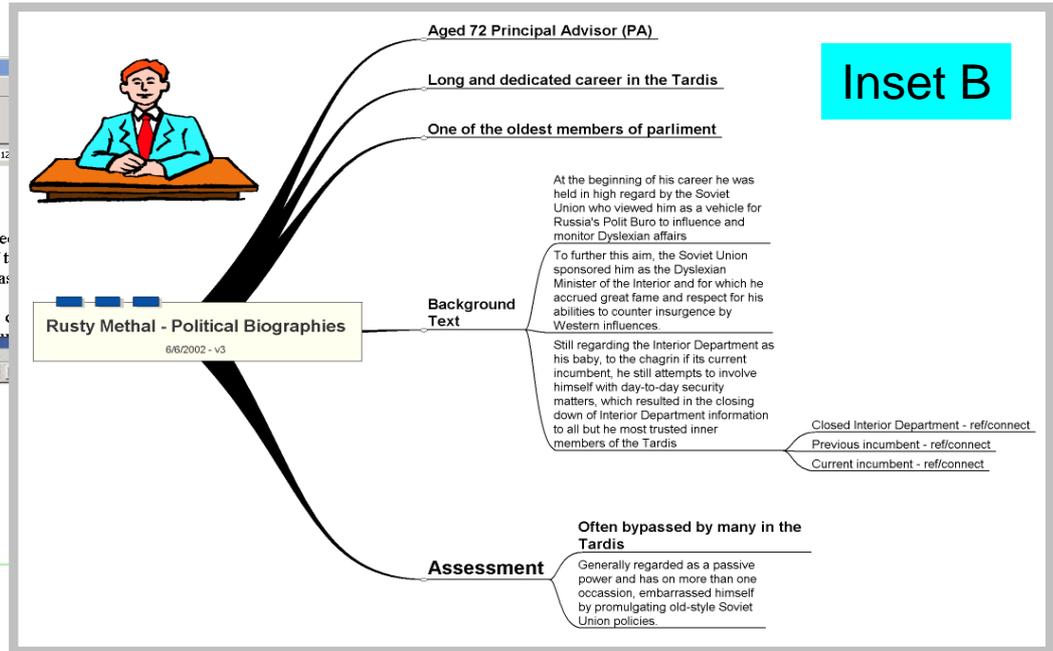
Scenario Development Support – Integration and Delivery

Inset A

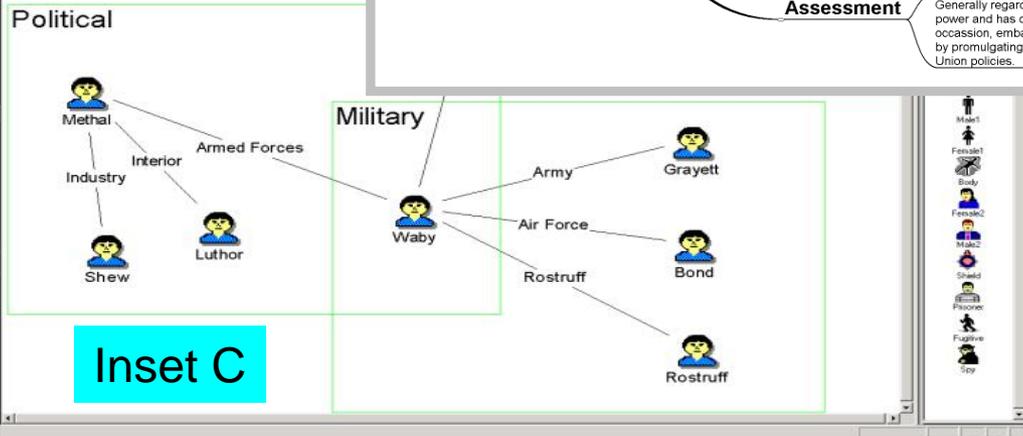
POLITICAL BIOGRAPHIES

4. **Rusty Methal - Aged 72 (Principal Advisor (PA))** - Appointed dedicated career in the Tardis, Methal is one of the oldest members of the Tardis. Often bypassed by many of the Tardis, he is generally regarded as a passive power. On more than one occasion, embarrassed himself by promulgating old-style Soviet Union policies. At the beginning of his career in high regard by the Soviet Union who viewed him as a vehicle for Dyslexian to influence and monitor Dyslexian affairs. To further this aim, the Soviet Union sponsored him as the Dyslexian Minister of the Interior and for which he accrued great fame and respect for his abilities to counter insurgency and Western influences. Still regarding the Interior Department as his baby, to the chagrin of its current incumbent, he still attempts to involve himself with day-to-day security matters, which resulted in the closing down of Interior Department information to all but his most trusted inner members of the Tardis.

5. **Lex Luther** - Age 100 - Background and...



Inset B



Scenario Development Support – Application

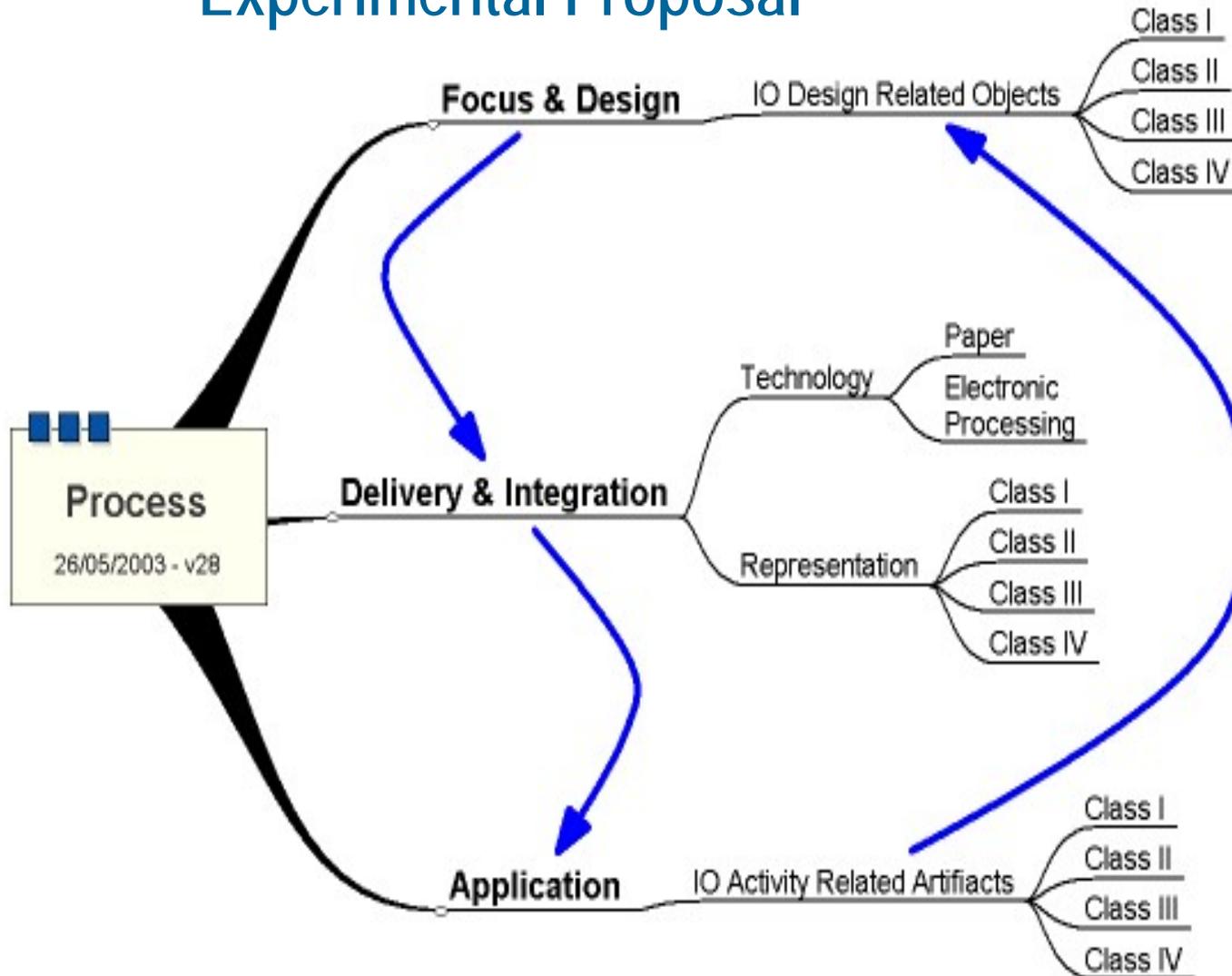
Application:

→ Triggers

→ Activity

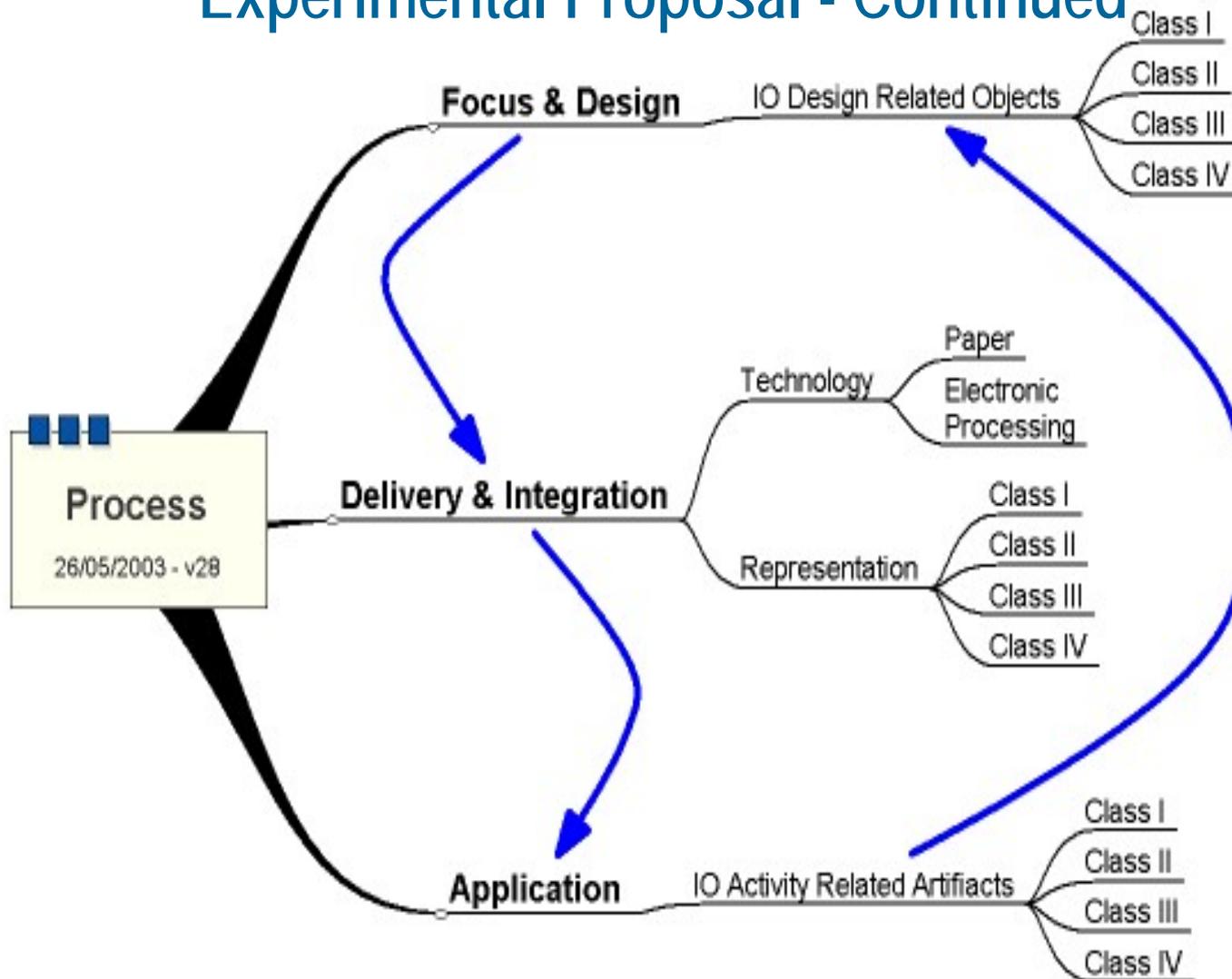
→ Experimental Observations

Experimental Proposal



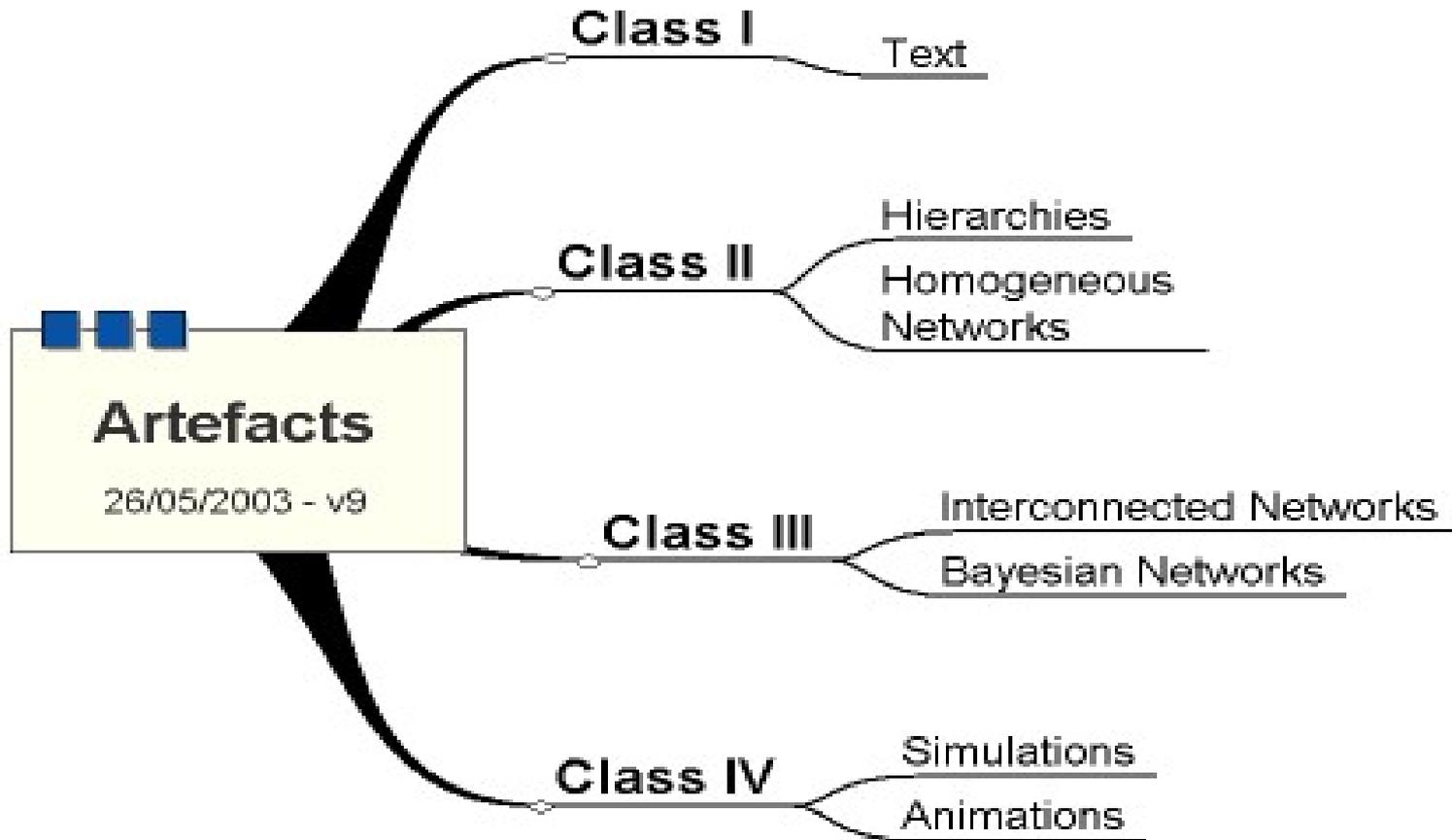
1. Are these important ?
2. Are these available ?
3. Are these the same ?

Experimental Proposal - Continued

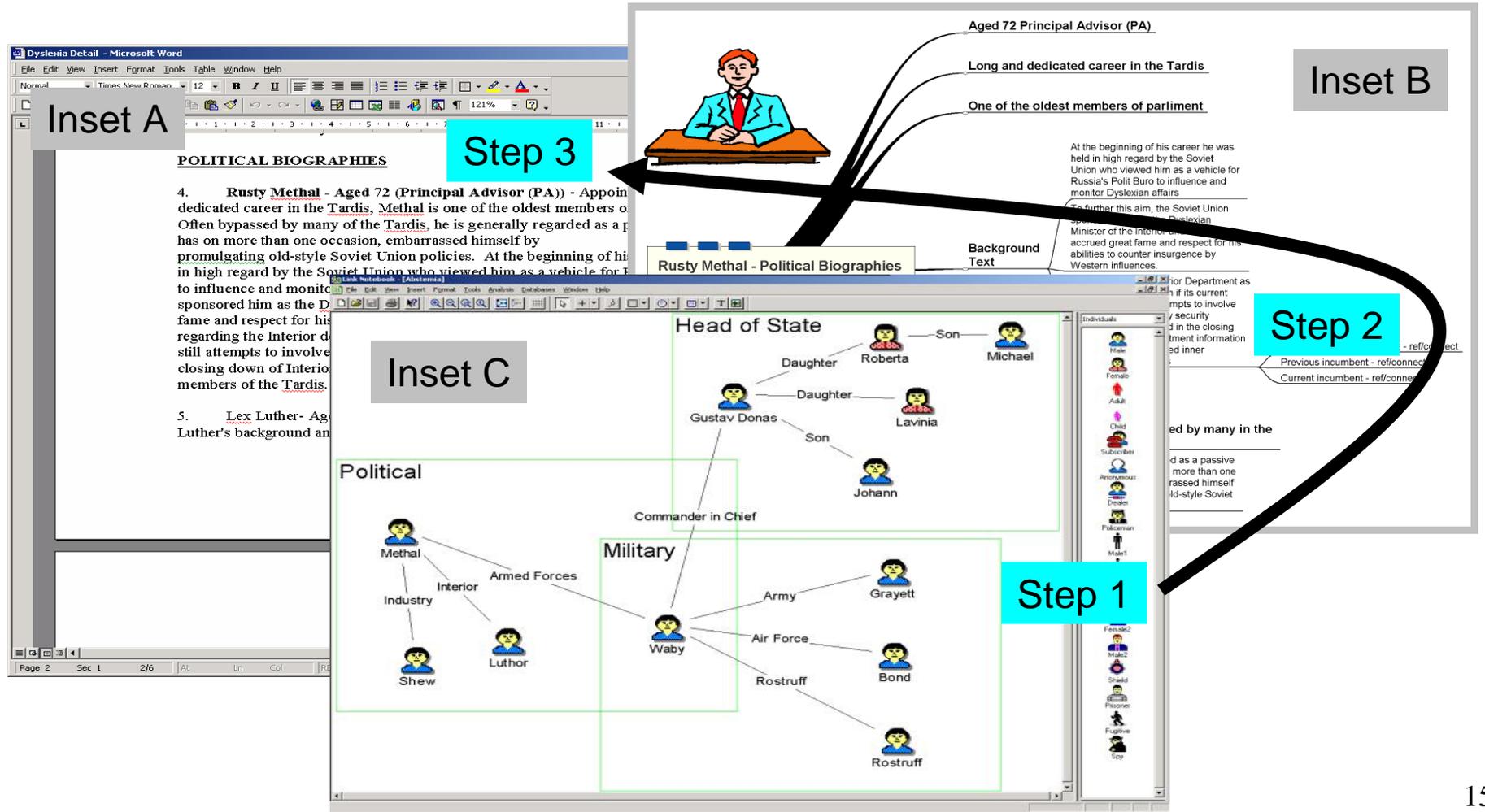


1. Are these important ?
2. Are these available ?
3. Are these the same ?

Artefact Classification



Example Encoding Process



Inset A

Step 3

Inset B

Step 2

Step 1

Inset C

Background Text

Rusty Methal - Political Biographies

Head of State

Political

Military

Individuals

Family Tree:

- Gustav Donas (Head of State)
 - Daughter: Roberta
 - Daughter: Lavinia
 - Son: Michael
 - Son: Johann
- Waby (Military)
 - Commander in Chief
 - Army: Grayett
 - Air Force: Bond
 - Rostruff
- Methal (Political)
 - Industry: Shew
 - Interior: Luthor
 - Armed Forces

Individuals List:

- Male
- Female
- Adult
- Child
- Subscriber
- Anonymous
- Dealer
- Policeman
- Man1
- Female2
- Male2
- Small
- Person
- Female
- Sp

Text from Document:

POLITICAL BIOGRAPHIES

4. **Rusty Methal - Aged 72 (Principal Advisor (PA))** - Appoin... dedicated career in the Tardis, Methal is one of the oldest members o... Often bypassed by many of the Tardis, he is generally regarded as a p... has on more than one occasion, embarrassed himself by... promulgating old-style Soviet Union policies. At the beginning of hi... in high regard by the Soviet Union who viewed him as a vehicle for I... to influence and monit... sponsored him as the D... fame and respect for his... regarding the Interior d... still attempts to involve... closing down of Interior... members of the Tardis.

5. **Lex Luther** - Ag... Luther's background an...

Background Text:

Aged 72 Principal Advisor (PA)
 Long and dedicated career in the Tardis
 One of the oldest members of parliament

At the beginning of his career he was held in high regard by the Soviet Union who viewed him as a vehicle for Russia's Polit Buro to influence and monitor Dyslexian affairs. To further this aim, the Soviet Union appointed Rusty Methal as Minister of the Interior and he accrued great fame and respect for his abilities to counter insurgency by Western influences.

for Department as... if its current... mpts to involve... / security... d in the closing... ment information... ad inner... - ref/connect... - ref/connect... Previous incumbent - ref/connect... Current incumbent - ref/connect...

ed by many in the... d as a passive... more than one... rassed himself... ld-style Soviet

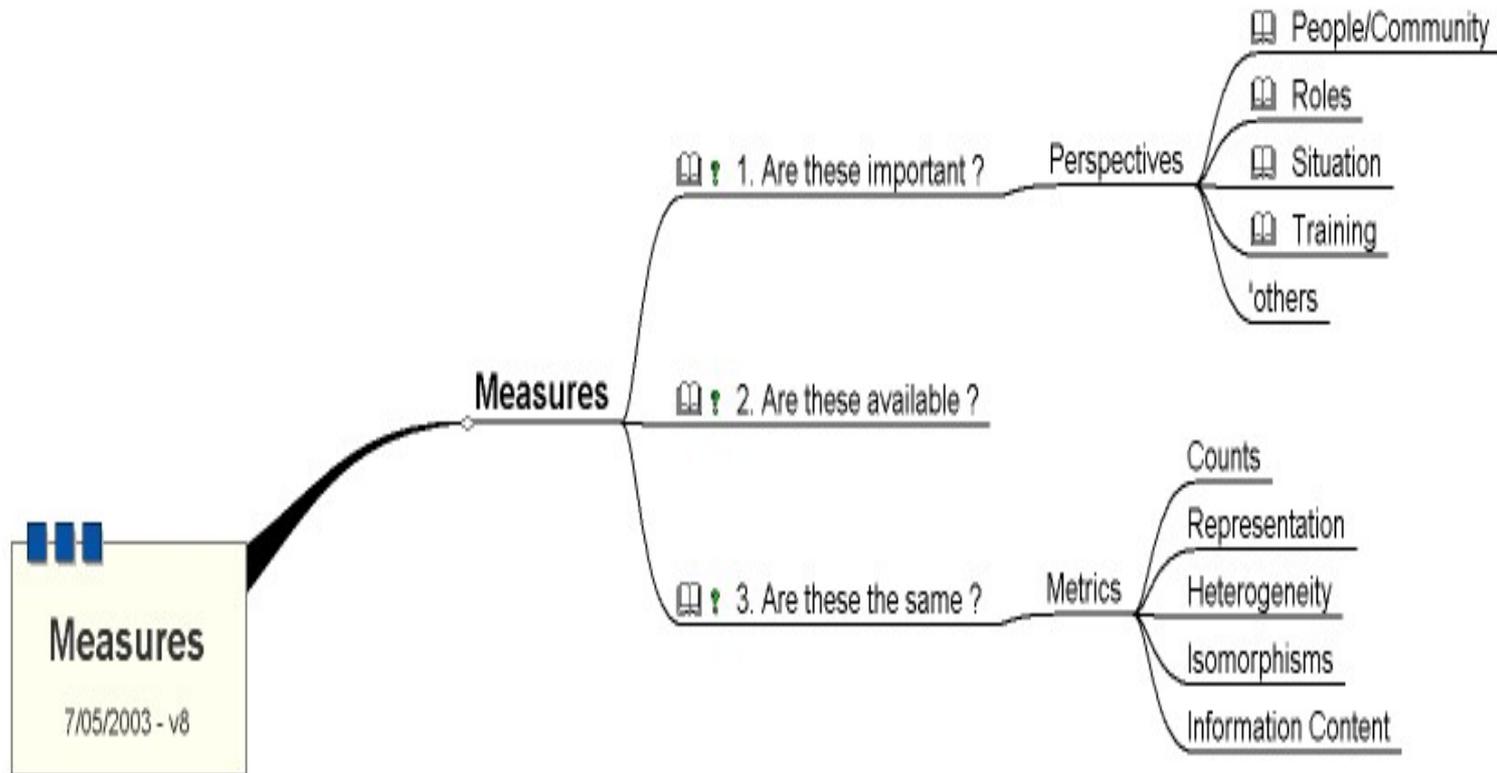
Specific Measures

*Are these (network representations) **important** (to IO staff, in the conduct of their work)?*

*Are these (information required to address IO specific questions) **available** (in a form suitable for analysis)?*

*Are these (network representations constructed by IO staff) **the same** (as those encoded in the scenario design process)?*

Network Measures and Metrics



Conclusion

Scenarios - Tailoring, Framework, Families of Scenario

Experiments - Measures, Humans, Objectives

Networks - Importance, Encoding Issues, Measures

Further Work – Broader experimentation incorporating greater allowance for human social activity in planning and decision making activities.



Questions ?