

Defence OR Symposium



Scenario Development for Information Operations (IO) Experimentation

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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 superior to develop a C2W plan for use in either dissuade the Dyslexian government from invading ABSTEMIA or defeat the Dyslexian capabilities. The plan must be achievable by NATO without significant military action. In any event, the potential risks to the lives of NATO forces are to be minimised. This brief, outlines the ways in which you could bring about the desired outcome.

five key elements of C2W. Each group will develop their proposals, which should clearly explain the five key elements of C2W. 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 &	Military Scope
	Political/Social	Limitations ROE	Intensity Tasks
	Historic Situation		Joint Command
	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	Increased contextual build up of History and Current affairs
	Economic/Military	
	Political/Social	
	Historic Situation	
Capabilities of Actors	Organisation, Order of Battle	Increased focus on social and organisational networks including C2, skill and morale. Reduced emphasis on ORBATs, and weapons.
	Weapons	
	Logistics	
Environment	Skill	
	Morale	
	Friendly Forces Adversaries	
Environment	Geography/Region/Terrain	Increased focus on social and organisational networks including C2, skill and morale. Reduced emphasis on ORBATs, and weapons.
	Climate/Weather	
	(Civil) Infrastructure (e.g. roads, bridges, ports, etc.)	

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:

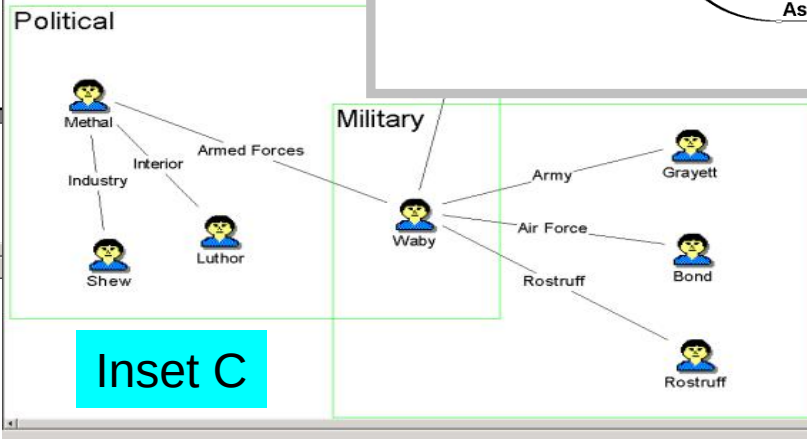
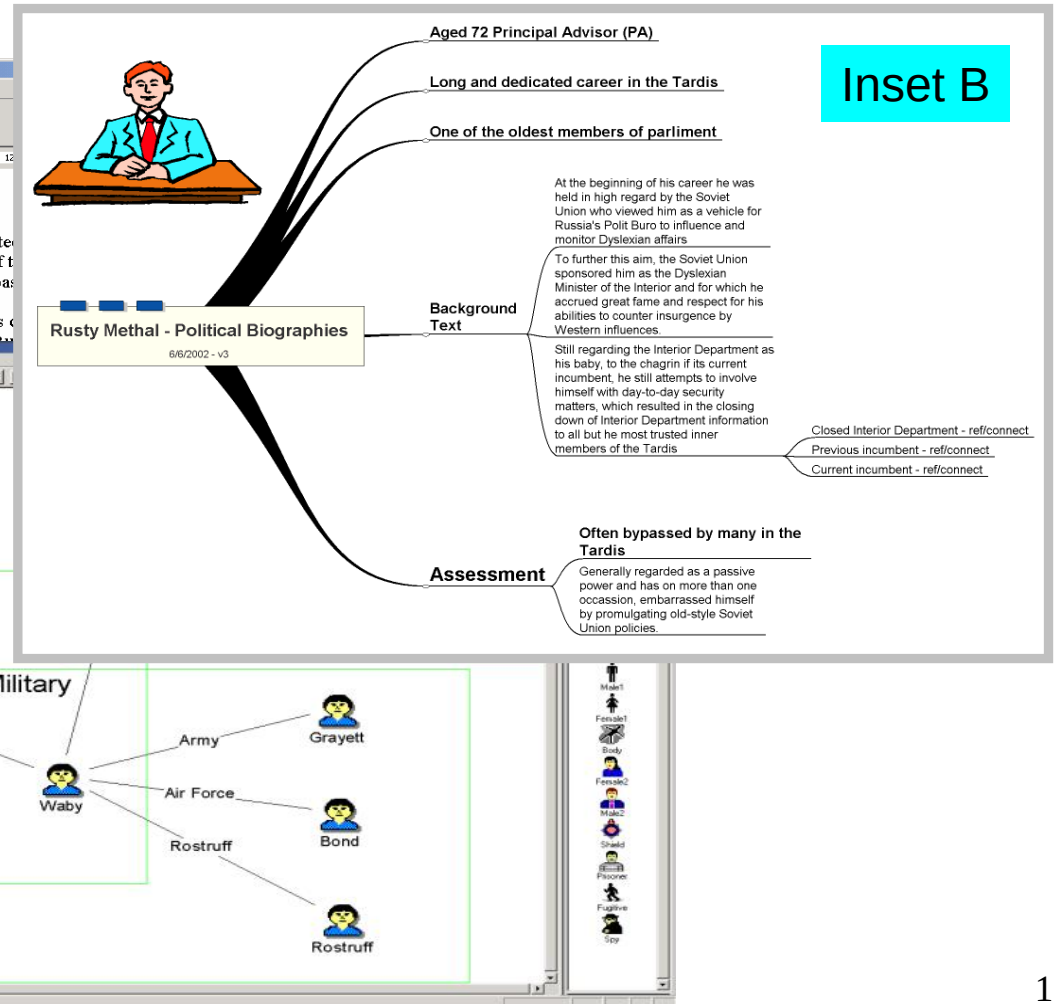
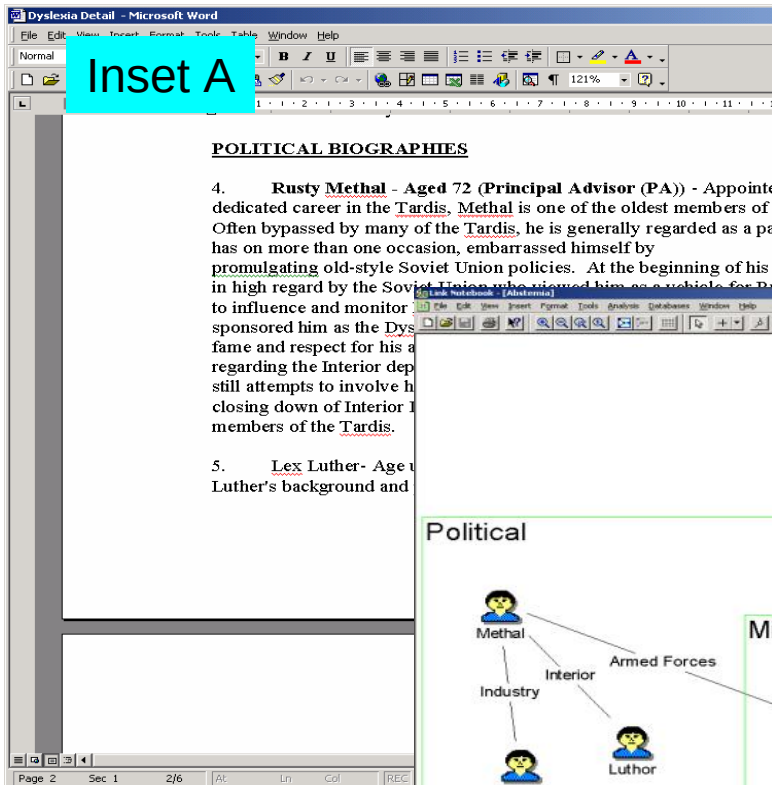
- **Scenario Elements** - Players, Circumstance, Time frame, History
- **Guidance Material** - Definition(s), Examples, Summaries
- **Development Support** - Focus, Design, Integration, Delivery, Application

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



Scenario Development Support – Application

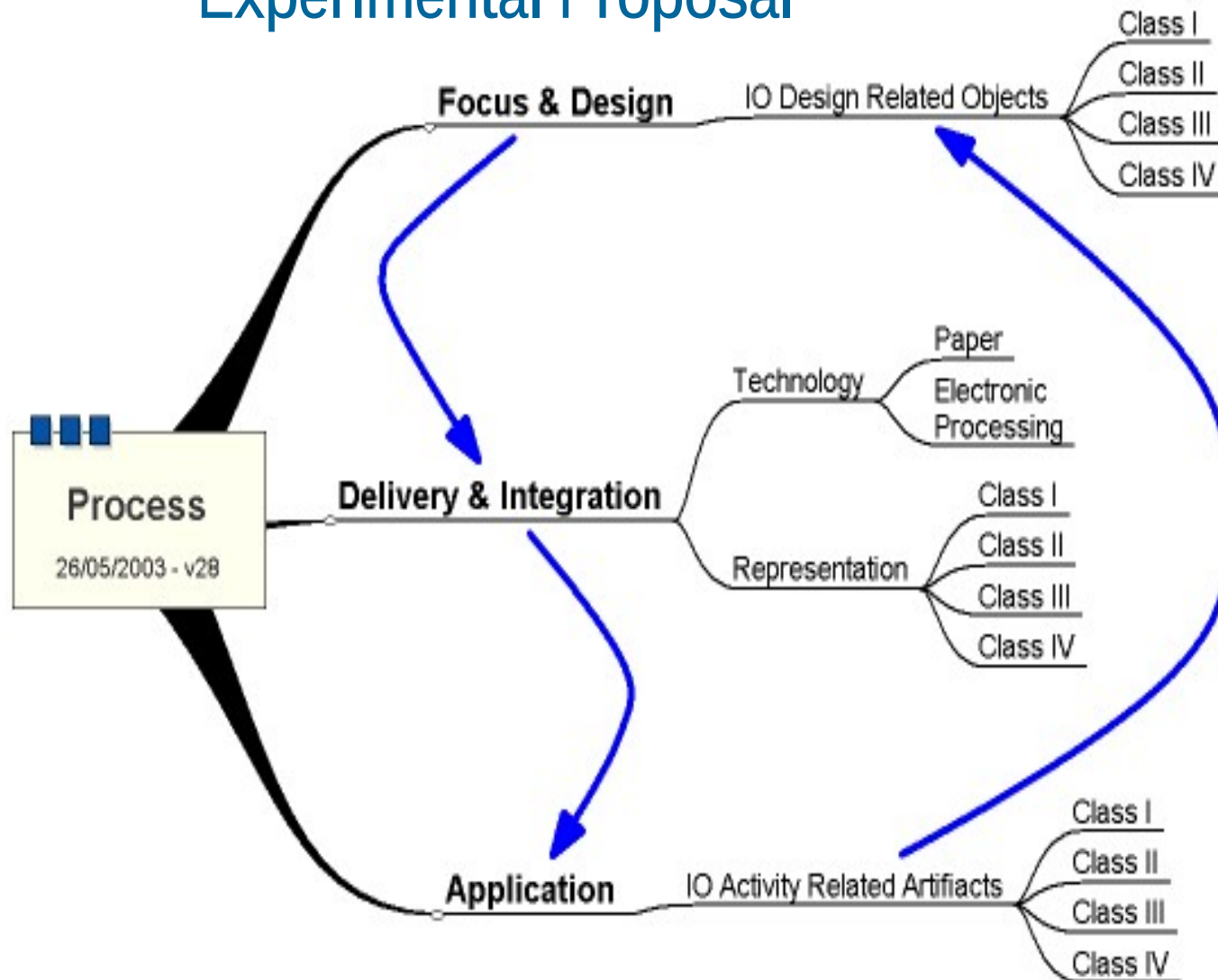
Application:

→ Triggers

→ Activity

→ Experimental Observations

Experimental Proposal

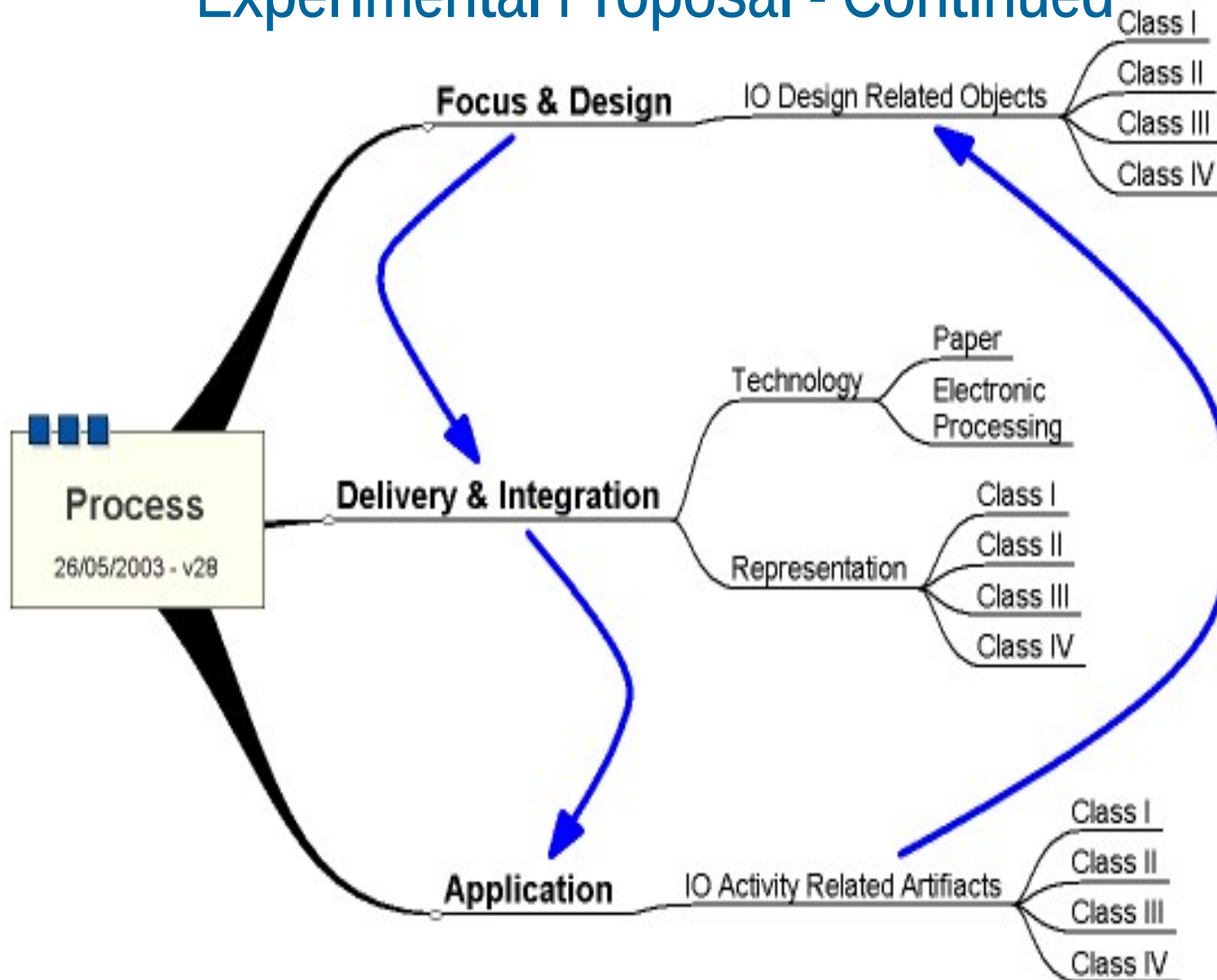


1. Are these important ?

2. Are these available ?

3. Are these the same ?

Experimental Proposal - Continued

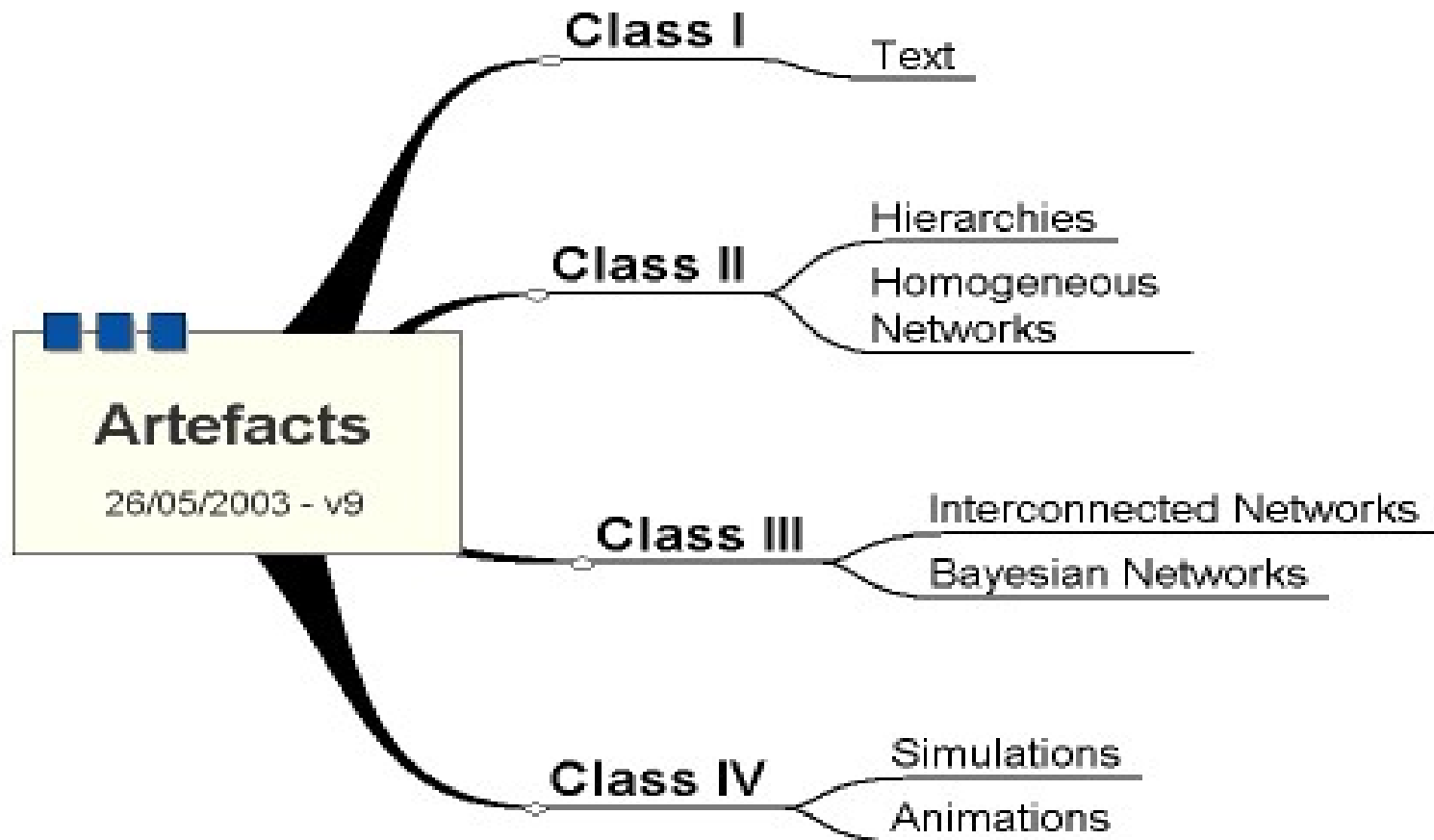


1. Are these important ?

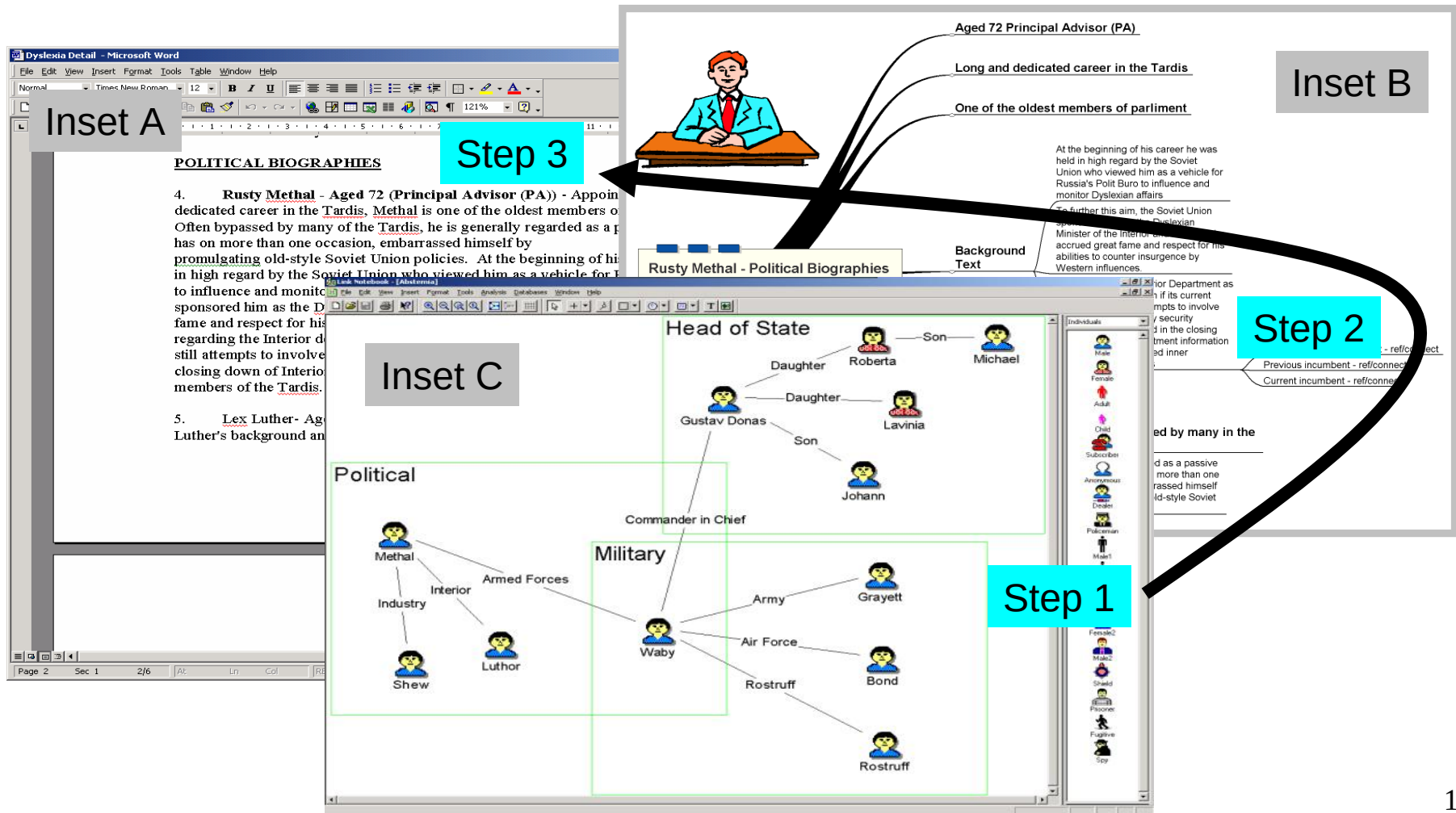
2. Are these available ?

3. Are these the same ?

Artefact Classification



Example Encoding Process



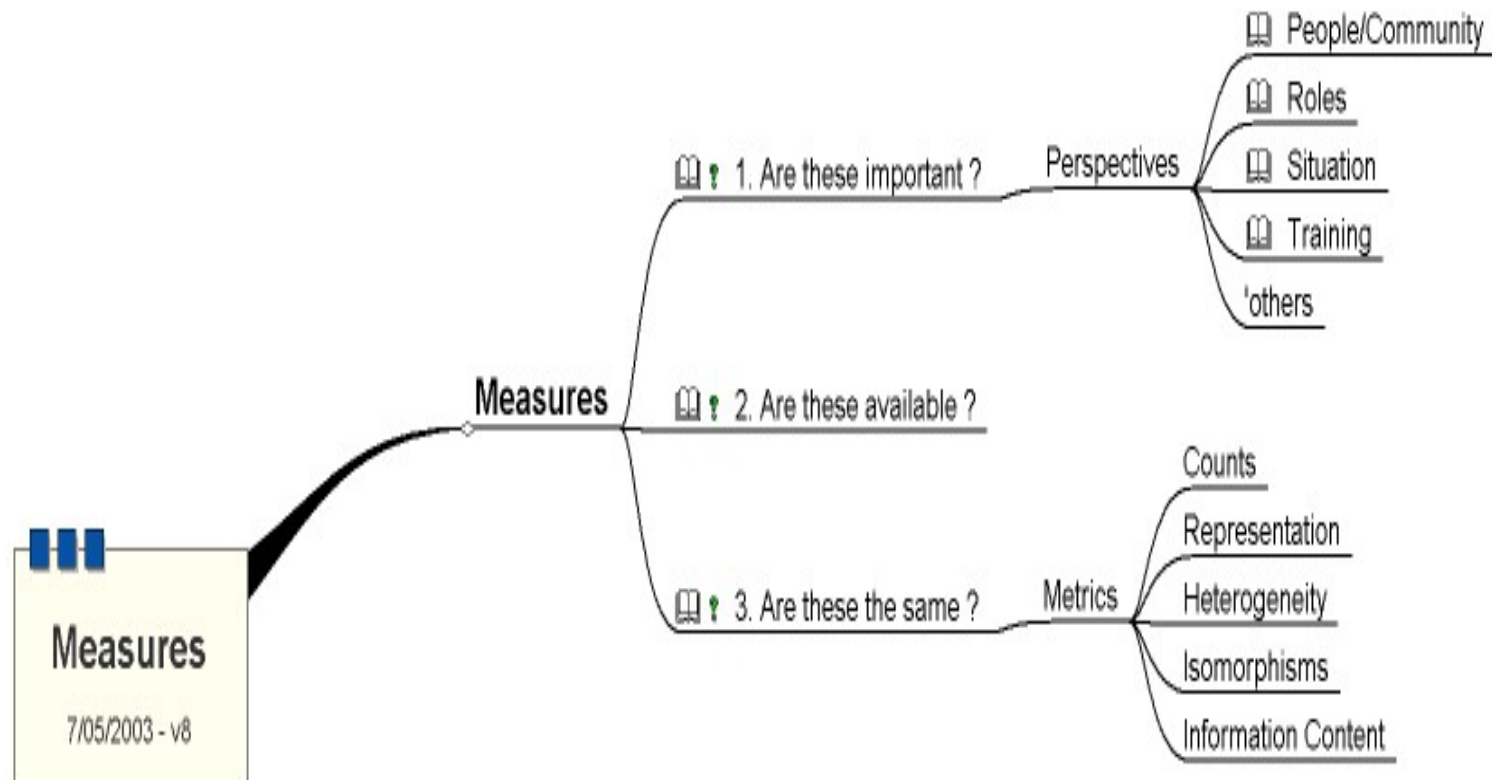
Specific Measures

*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 ?