



Necessary Skills and Practices required for Effective Participation in High Bandwidth Design Team Activities

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Introduction

- How do co-located teams differ from virtual teams?
- How are generic skills necessary for co-located teamwork managed in a virtual working environment?
- What are the issues involved with the use of generic skills in the virtual design environment?




Scenario

- Two technically competent design professions
- Breakdown in interpersonal relationship
- Good technical skills are undermined by poor generic skills




Background

- Project Team Integration: Communication, Coordination and Decision Support (CRC-CI-2001-008-C-04): "Scoping Studies"

The '**people**' aspect:

- Virtual Teams (VT)
- Communication between project team members
- Skills required to 'use' new technologies "effectively" and "efficiently"



CRC Project

- Team Collaboration in High Bandwidth Environments 2002-024-B
- 3 Project Streams:
 1. Processes
 2. Models
 3. Generic Skills




Question?

"How does virtual work differ from co-located work? What are the issues?"



Composition & Nature of Teams

Teams are people interacting...

'...adaptively, independently, and dynamically towards a common and valued goal' (Salas et al., 2003).



Composition & Nature of Teams

Co-location

- Same physical location
- Synchronous
- With increasing globalisation, co-location becomes more difficult.



Composition & Nature of Teams

Virtual Teams

- Operate in different physical spaces
- Email, fax, phone
- Electronic whiteboards
- Multi-user 3D virtual Worlds



Composition & Nature of Teams

Comparison

- '...first and foremost teams' (Lurey and Raisinghani, 2001)
- Synchronicity
- Global Virtual Teams



Composition & Nature of Teams

Advantages

- Increase in team knowledge and experience.
- Shorter production lifecycle.

Challenges

- Contextual cues and body language.
- Lack of leadership hierarchy.
- Team at the mercy of technology.
- Training



Question?

"What are the generic skills necessary for co-located teamwork, and how are these skills managed in a virtual working environment?"



Generic Skills

- Generic skills defined
- Ability to utilise generic teamwork skills in the virtual environment



Generic Skills in a Virtual Context

Core generic skills in a virtual context:

Adaptability	Interpersonal Relations
Shared Situational Awareness	Co-ordination
Performance Monitoring and Feedback	Communication
Team Management	Decision Making



Generic Skills in a Virtual Context (2)

Team skills in a team context:

Dealing with Issues of Trust
Dealing with Cultural Issues
Archiving



Question?

“What are the issues involved with the use of generic skills in virtual design environment?”



Design Team Activity

Design Process	Design Activities	Construction Process Protocols
Planning	Orientating	Demonstrating the need
-	Subdividing the problem	Conception of need
-	Establishing roles	Outline feasibility
Analysis	Information seeking	Substantive feasibility study and outline financial authority
-	Information sharing	Outline conceptual design
Evaluation	Monitoring	Full conceptual design
Decision	Negotiating/ understanding	Coordinate design, procurement, and full financial authority
-	Designing	Production information
Control	Building	Construction
-	Evaluating	Operation and maintenance



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Conclusion

- Challenge is to incorporate aspects of co-location into virtual work i.e. non-verbal communication
- Caution should be used when attempting to generalise generic skills profiles across disciplines
- Skills mapping and measurement are vital next stage objectives.



Summary

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