Australian Government

Department of Defence

Defence Science and Technology Group

Trusted Human-Synthetic Automomy Partnership

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Decision Science

JOAD

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Trust, autonomy, partnership: Research needed (1)

- Why research Trusted Autonomous Partnerships (TAPs)?
  - Because the end goal is TAPs working in real situations: and we don't know how to achieve this.

Elements involved

1. **Synauts**- assessable capabilities

2. **Humans:**

   - What doe we understand by autonomy

   - What makes us trust autonomy appropriately as partners

3. **Human_Autonomy Teams** – best division of effort

4. **Socio-legal**: responsibility

Trust, autonomy, partnership: Research needed (1)

What's a good outcome from TAPs research?

- Essential: Humans on Top, Autonomy on Tap
- Synauts design specifications
  - What creates acceptable trust by humans in synauts
- Synaut certification process that satisfies humans
- Workload sharing specified (effective teams)
- Trust inherent (designed in) to synauts through Mutual Mental Models & Social Rules
- Minimal human retraining to work in mixed teams

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Current Tyche Theme three projects

- Legal and cognitive aspects (more than Article 36)
- Human-Autonomy Teams (with USA Airforce)
- Organisational re-jigging to incorporate Mixed Teams
- Cognition for Uncertainty (coming)

Presentations

Keynote

- Dr David Aha, Naval Research Labs (USA)

Presentation 1

- Professor Janet Wiles, University of Queensland

Presentation 2

- Australian position: Dr Glen Smith, DST Group

- USA position Dr Peter Friedland, AFSOR

<refreshment>

- Q & A for session

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