



DEFAUS 18

# RETHINKING MAPS

PITCHER

**TINGTING LUO**

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# ABSTRACT

The importance of maps in the modern battlespace cannot be understated. The evolution from basic hand drawn images to digitally generated maps using satellite imagery and high resolution photography with analytical tools has been significant. As maps become more detailed and digitised, the steps in improvement now reside not only in the detail that technology through satellite and photography can provide, but also in the material that maps are printed onto. As suggested by the Chief of Army's term 'accelerated warfare', the tools that our military use will also need to keep up with emerging technology and improved efficiency.

While we are in the digital age, the importance of a physical map cannot be understated. The ADF, particularly the Army needs to be able to operate in a degraded electronic C4I environment, where GPS and electronic C4 nodes such as BMS may be targeted by adversary. For this exact reason, Commander 3 Brigade has prioritised "the ability to navigate by day and night without GPS" as a core skill required by all officers and soldiers. As an important tool to this, the ADF will need good maps.

The purpose of my idea pitch is to shape the ADF towards looking at maps that are traditionally printed on paper, towards a new direction where the mapping product enhance usability. Ultimately with the aim to assist the tactical commander on the ground in faster decision making.

The process that individuals go through on receiving a map to the use of the map on the ground requires preparation of the map before use. All of this can be simplified into one step - simply achieved upon the issuing of the map. A map that is



# PROPOSAL AND OUTCOMES

waterproof, crinkle proof and that can be easily stored where ever and used again. This is the idea of a hybrid mapping material where it combines the properties of Tyvek, a paper-based waterproof material and existing flexible cloth maps.

Applied to a military context, these maps will allow commanders on the ground to easily access, use and store maps on the go. Working together with BMS in vehicles, and the traditional paper maps that hang in CPs, these maps provide the flexibility to the commander on the ground with its ease of access and re-use. It will increase decision making but giving more time to the commander to prepare, process and think rather than preparing or fumbling with the map, as the map can simply be placed away in one motion, without issues of it being wet or torn.

The desired outcomes are:

- First, for the development of a hybrid mapping material to start, and ultimately used in mass volume.
- Second, as an interim step-up solution, the use of either Tyvek or cloth provided by the Australian Geospatial Organisation. This is to shape the current users towards the hybrid mapping material and away from the traditional paper based maps, given that this is a service currently provided by the AGO at no charge to the Department of Defence. The recommendation from here is for the amphibious task group as the test audience for the Tyvek or Cloth maps, in Ex TS 19. This will see the test of the two materials and provide feedback for user requirement for the hybrid material and also see the ADF move away from the reliance on paper maps.