12TH ICCRTS
"Adapting C2 to the 21st Century"
Title:
"Challenges in Data Collection and Analysis in Multi-National Experimentation"
Topics:
Organizational Issues
Cognitive and Social Issues
C2 Metrics and Assessment
Network-Centric Experimentation and Applications
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Abstract:

Military Warfighting Experimentation is an event used to learn whether a function, method, process, machine, etc will work or better stated to learn "how it will work," in a simulated environment in order to make educated determinations for real world operations. In order to make these educated determinations, analyst must collect applicable data and analyze it in a manner/method which answers the questions or hypotheses being investigated. Is the data being collected the appropriate data and does the analysis plan reflect the aims of the experiment? This question is applicable in any experimentation endeavor. Multi-national experimentation is no exception. Some of the same challenges that face multi-national experimentation face other types of experimentation while some are uniquely multi-national.

We plan to focus upon our insights from experiments MNE4 (Multi-National Experiment 4) and UR 2015 (Urban Resolve 2015) as our basis of exploration realizing that not all findings presented are uniquely multi-national. Realizing that rarely are two experiments are the same the purpose of this paper is not to create firm and fast rules for data collection and analysis in multi-national experimentation but to leverage findings for future experiments such that we do not "reinvent the wheel". This should help advance and improve the overall community's experimentation results and products.

Outline:

I. Introduction discussing MNE4 and UR2015
   a. Type of experiment
   b. General background
II. Aspects of Multi-national experimentation and how they differ from others (laying out the groundwork for some of the challenges)
   a. Language and culture
   b. Many National Directors
   c. Differing viewpoints
      i. Concepts
      ii. Priorities of experimentation
III. Differences between MNE4 and UR2015 (brief overview of differences)
   a. Embedding of analyst in cells
   b. Solution oriented versus concept oriented
   c. Many surveys versus few
   d. Quantitative versus qualitative
IV. Challenges (I am sure there are more, but these are some that first come to mind)
   a. Sample size
      i. Very small in some cases
      ii. Representative of population?
   b. Surveys
      i. Converting the qualitative into quantitative
      ii. Frequency of surveys
      iii. Language
      iv. Timeliness of completion and delivery
   c. Training
      i. Players
      ii. Analysts and observers
      iii. Tools

    d. Social network
        i. Back room discussions
        ii. One-on-one versus over distributed environment
        iii. After hours chats
V. Aspects that could use some improvement
    a. What could have been better
    b. What caused the need for improvement
    c. Can it be improved upon and what are the potential solutions?
VI. Summary and Way Ahead

References:

- COBP For Experimentation
- COBP Campaigns of Experimentation
- The Logic of Warfighting Experiments
- Interviews with Analyst from MNE4 and UR2015
- Final/interim reports for MNE4 and UR2015
- Interviews with Experiment Directors MNE4 and UR2015