Framework-Survey Integration Group Report

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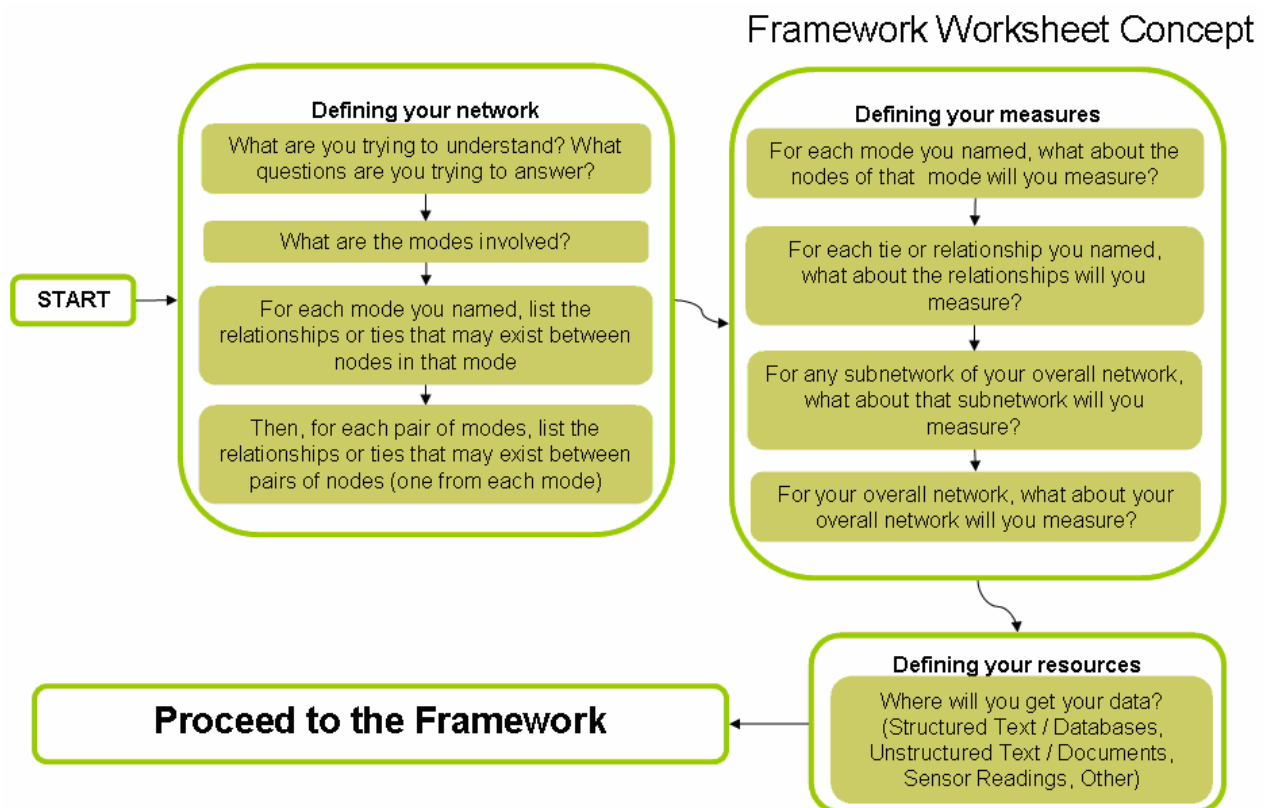Northrop Grumman
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1   INTRODUCTION

The framework and survey have been independently generated within the RTG. To bring them together is an ongoing project. The objective of the working group was to converge them so that the framework could be used to determine the effectiveness of the applications in the survey for various user purposes. The group worked mainly on the framework to further develop it in terms useful towards integration with the survey.

2   WORKSHEET CONCEPT

One conclusion reached during the working group was the need for a worksheet what would guide users through the process of defining their problem and network in preparation for using the framework. The worksheet may be some version of the following:

3   REFINED FRAMEWORK

The framework was refined as a pair of taxonomies that would be presented to the user either interactively or as a check list where the user would define their specific requirements.

3.1   Task Level Taxonomy

What follows is a taxonomy for defining the user task aspects required for the framework.

- Domain Context
  - Tempo
    - Real time
    - Short Term
    - Long Term
  - Activity
    - Explore
    - Monitor / control
    - Search
    - Alert
  - Domain Context
- Network Aspects
  - Nodes
    - Single Mode
    - Multi-modal
  - Links
    - Single links
    - Multi-plex
  - Metrics
    - Single metric
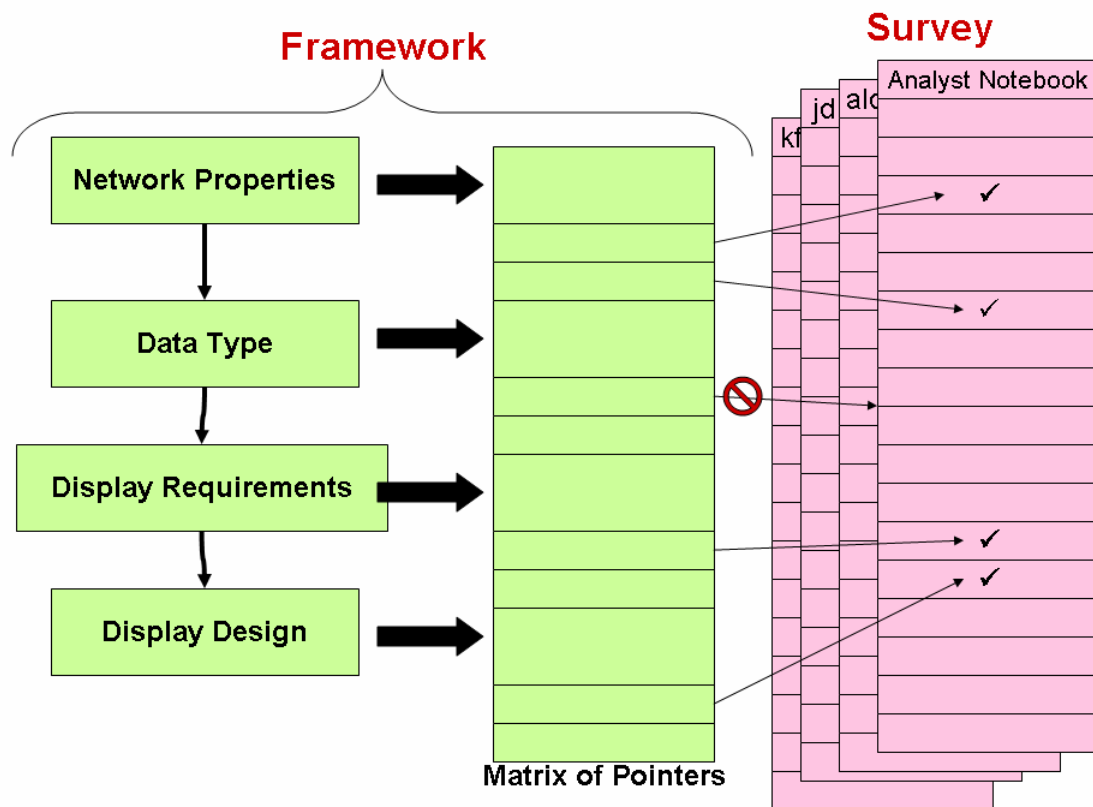   - Multi-metric

3.2   Display Taxonomy

This taxonomy details important properties of the display that will aid the user in choosing a visualization application:

- Timing
  - Static
  - Dynamic

- Data selection
    - User-selected
        - Interactive
        - Preset
    - Algorithmically directed
- Data placement
    - Located
        - Point
        - Extended
    - Labeled
    - Interactive
    - Non-interactive
- Data values
    - Analogue
        - Scalar
        - Vector
    - Categorical
        - Linguistic
        - Non-linguistic
- Data manipulation
    - Interactive
    - Algorithmic

4   USING THE FRAMEWORK

The overall intent for how the framework would be used when complete is as follows:

The user details their requirements within the framework. These requirements are mapped – part by part – to specific characteristics detailed for each application within the survey. At the same time, aspects of the user requirements that are not met by applications in the survey would be brought to the user's attention as not being met. This aspect will be useful to developers as it will point them to the areas of greatest development need; but would serve the user community equally well to manage expectations and detail the art of the possible.