

Text Mining non-technical terms for technology mining

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Background

- ▶ Project Sponsored by the Office of Naval Research (ONR), US Army Engineer Research and Development Center (ERDC), and Naval Surface Warfare Center
- ▶ The Primary Example used is from the results from the Littoral Combat Ship (LCS)
- ▶ Analysis of 517 records from Compendex and Academic Search Complete combined



We value the Technical Terms

▶ Words we want to keep:

- ▶ Weapon system
- ▶ Unmanned vehicles
- ▶ Sea sparrow Missile
- ▶ Diesel Submarine
- ▶ Aluminum superstructure
- ▶ Hull mounted sonar
- ▶ Joint high speed vessel
- ▶ Trimaran hull form

Words we would toss:

proposal, fund, ready, money,
success, delivery



The Value of the Non-technical Words

- ▶ Insight into the stage in the life cycle of the technology.
 - ▶ proposal vs delivery
- ▶ Sentiment
 - ▶ Difficulty, criticisms
 - ▶ Ease, confidence, win
- ▶ Identify troubled areas
 - ▶ problem, mistake, malfunction)
- ▶ Analyze Budgetary Aspects
 - ▶ Budgetary concerns
 - ▶ Budget reductions
 - ▶ Unrealistic cost goal



My Point:

- ▶ There is value in stripping the technical terms and analyzing the non-technical terms to provide a context for the technical terms.
- ▶ An yearly overlay between technical and non-technical terms could provide additional insight into the progress and direction that a technology could take
- ▶ Research into consistent or predictable patterns and structures of non-technical terms is warranted