



Insights from Text



Language Computer

January 14th, 2022

Language Computer Corporation

“Boutique” provider of **next-generation** natural language processing software solutions for Government and commercial customers

Founded **1995**

Based in **Richardson, Texas**

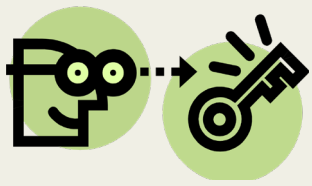
- Strong track record: top marks at more than **20** different Government evaluations since 1999
- Over 50 peer reviewed publications

Marc Tomlinson
Principal Scientist

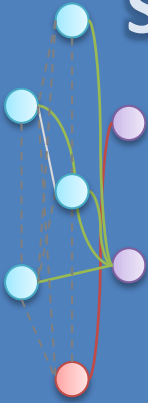
Sean Monahan
VP Engineering

Finley Lacatusu
VP Operations

{marc, smonahan, finley}@languagecomputer.com



Semantic Analysis and Knowledge Base Creation

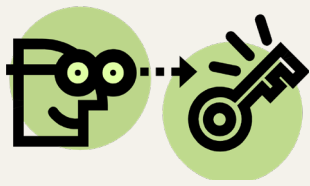


- ❖ Named Entity Recognition
 - ❖ People, Organizations, and Products
- ❖ Event Recognition
- ❖ Concept Recognition
- ❖ Geocoding
- ❖ Knowledgebase Linking
- ❖ Time-stamping
- ❖ Modality

Summarization

- ❖ Event Tracking
- ❖ Update Summarization
- ❖ Product Tracking
- ❖ Dossier Generation

Organization



Social Insights

Personal Analytics



- ❖ User Segmentation
- ❖ Cognitive State
- ❖ Personality
- ❖ Goals
- ❖ Intentions
- ❖ Actions

User Interaction Analytics



- ❖ Social Actions
- ❖ Reputation
- ❖ Interaction Patterns
- ❖ Influence
- ❖ Sentiment

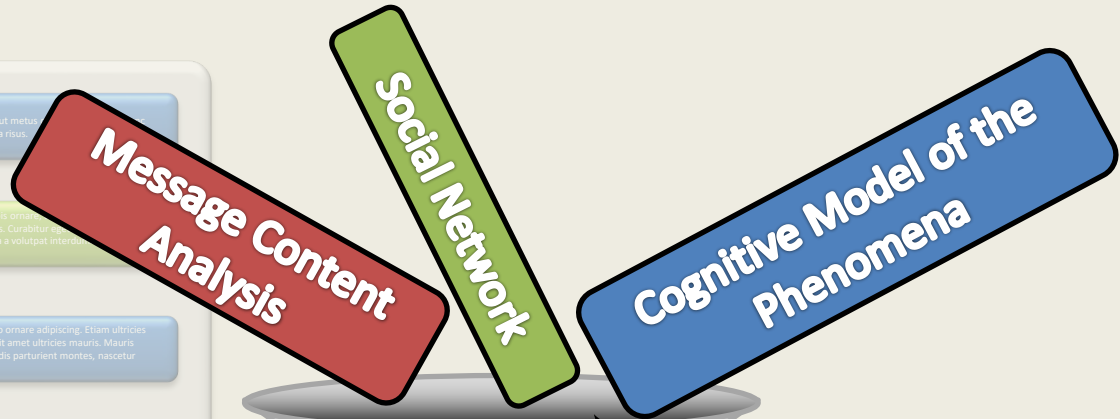
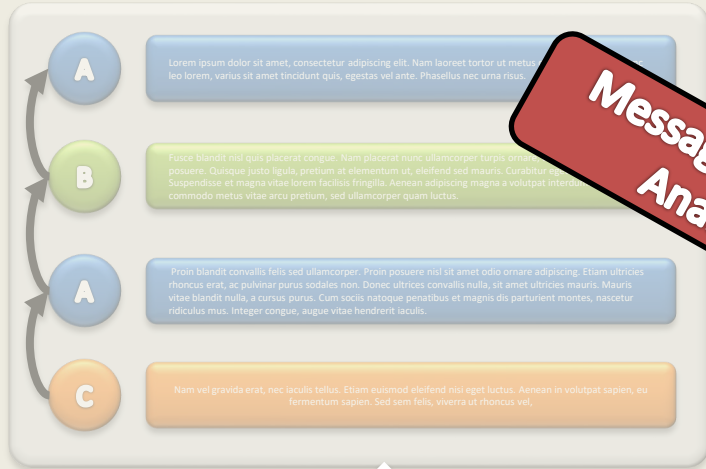
Group Analytics



- ❖ Social Roles
- ❖ Social Capital
- ❖ Group Leadership
- ❖ Group Cohesion
- ❖ Group Success



Social Insights



Who has social capital?

What are their intentions?

Will they be successful?



Personal Analytics

@Litlslim



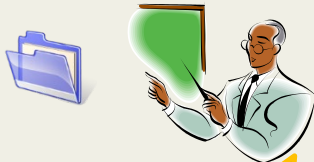
“I hope that the Sigma Nus are bringing their game tonight... and some tissue. #BRINGIT #Paintball”

Expressions of Skills & Control

Motivational Acts

Setting Goals

CULTURE: *College-Student*



Reward Mentions

PERSONALITY TRAITS: *Extravert*



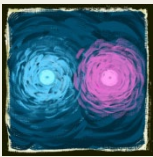
COGNITIVE STATE: *Promotion-Focused*

#bringit



Creative Potential

Motivated



Case Study: Flickr

Success: Requires motivation (goals, utility, and community support) and the ability to find creative solutions. Do you know when someone is about to be successful?



Identified how motivated individuals were on DeviantArt and Flickr as measured by the quality of their future contributions. We utilized LCC's state-of-the-art motivational act classifier coupled with our models of user behavior and group dynamics. Our predicted quality matched the actual quality of the next submission with a correlation of .71. The system has an accuracy of 86% for predicting changes of more than one standard deviation.

M. Tomlinson et al, "#impressme: The Language of Motivation in User Generated Content," proceedings of CICLING (2014).

M. Tomlinson et al, "Capturing Cultural Differences in Expressions of Intentions". proceedings of COLING (2014).

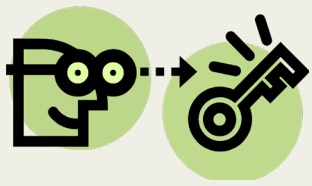


User Interaction Analytics

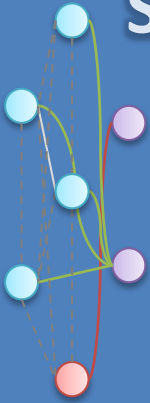
Social acts are pragmatic speech acts that signal a dialogue participant's social intentions, ranging from establishing mutual bonds to asserting dominance over another. We can identify 18 social acts, which are motivated by work in psychology and organizational behavior.

List of Social Actions Detected in Language

Supportive Behavior	Statements of support for another's ideas/actions manifested through encouragement, intention to help, praising, etc.
Undermining	Hostile expressions meant to erode the support or weaken the stance of another's goal.
Solidarity	Explicit affiliation by one individual toward another by drawing attention to attributes or connections shared.
Offer Gratitude	A sincere expression of thanks by one individual toward another.
Disrespect	Inappropriate language, such as mocking, or derogatory statements.
Agreement	Explicit utterances of agreement, approval, or acceptance.
Disagreement	Explicit utterances of disagreement, disapproval, or rejection.
Challenge Credibility	Attempts to challenge or discredit another's credibility.
Managerial Influence	Assertions of administrative sway or control the direction in the discussion
Leadership Avoidance	Attempts to shirk administrative responsibility or purposefully yields control of the discussion.
Group Affordance	Shows of respect and esteem through honorifics and yielding to others in the group.
Establish Credibility	Attempts to increase standing within group through demonstrating experience.
Leadership Traits	Language, such as locus of control and certainty, associated with individuals who have a leadership role.
Task Control	The ability of an individual to introduce and manage tasks for a group. Evidence of Task Control includes task introduction.
Task Conflict	Disagreement over the manner in which a task is performed.
Relationship Conflict	Personal conflict between individuals.
Mediation	The mediation of conflict.
Task Perspective	Abstraction / simplification / elaboration



Semantic Analysis and Knowledge Base Creation



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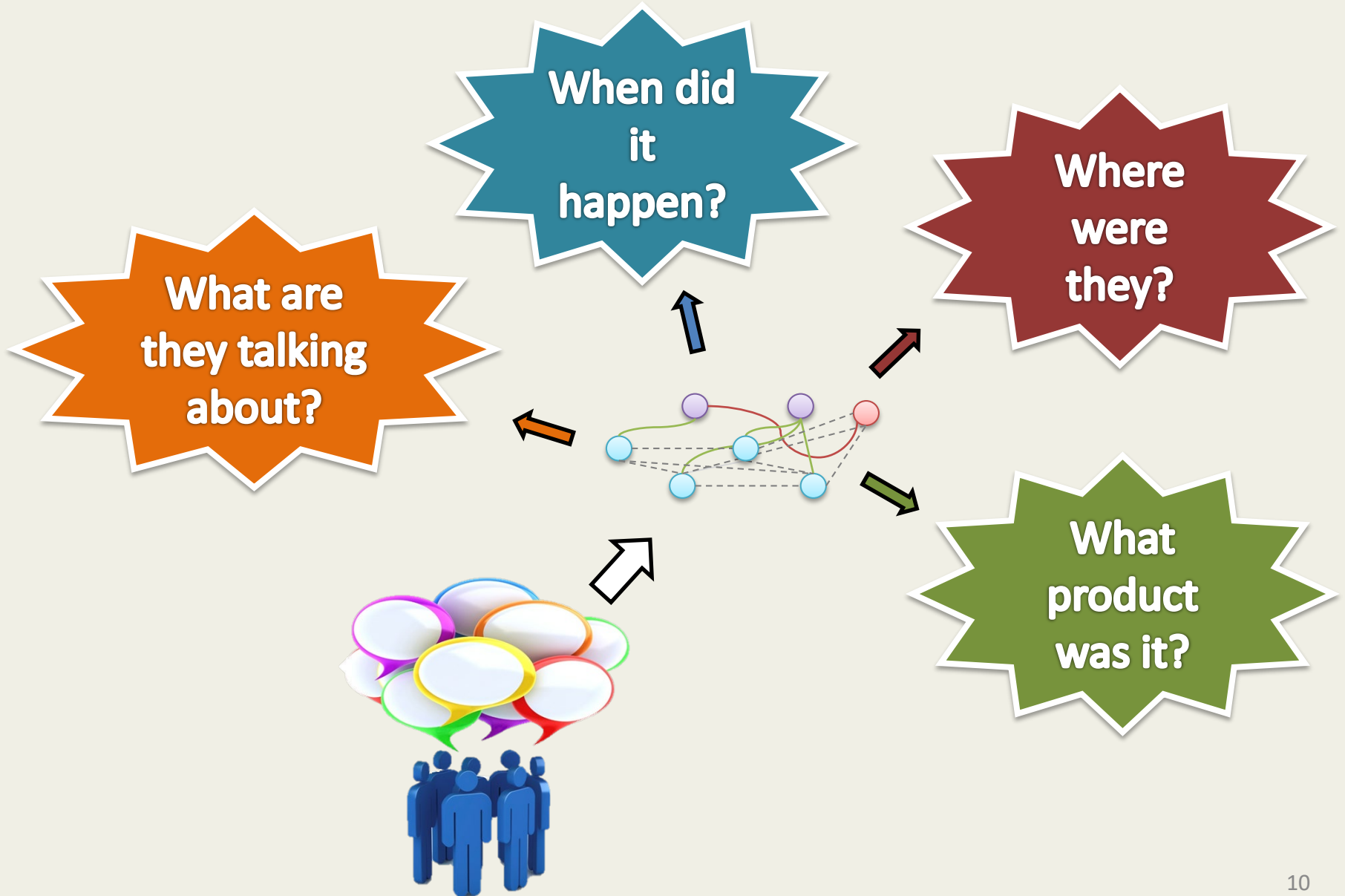
Summarization

- ❖ Event Tracking
- ❖ Product Tracking
- ❖ Dossier Generation
- ❖ Tell me about...

Organization

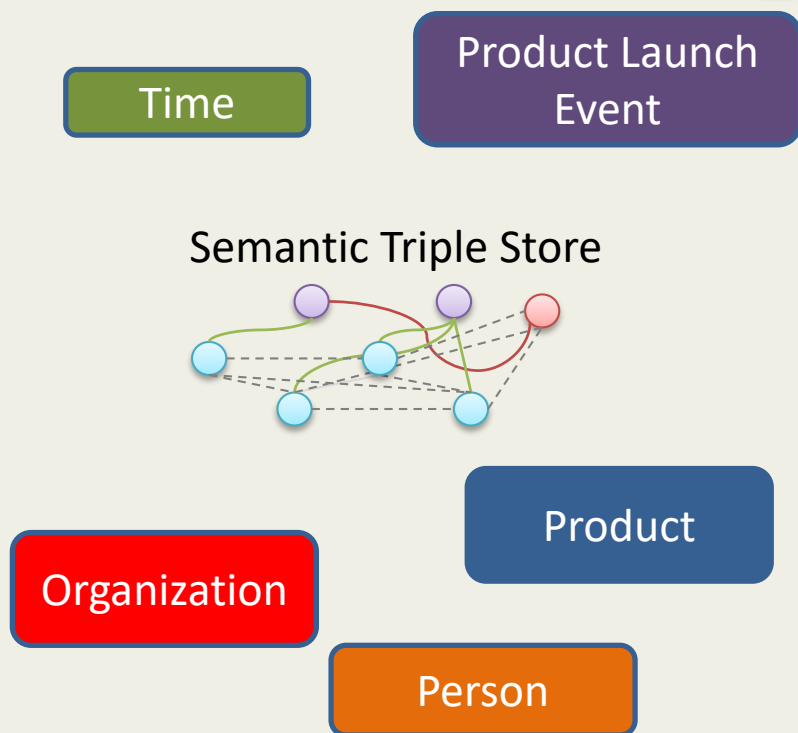


Knowledge Analytics





Rapid Case Study: Knowledge Base Creation



Burger King's September launch of Satisfries, better-for-you french fries with less fat and fewer calories than the competitor's product, "brought in incremental consumers who would otherwise not have come into **Burger King**," said **Alex Macedo**.

S. Monahan and D. Carpenter, "Lorify: A Knowledge Base from Scratch," in Proceedings of the Text Analytics Conference, 2012.



Case Study: Dossier Generation



“Tell me about... X”

- People
- Relationships
- Organizations
- Events

Template Modeling

Content Extraction

IntraDossier Links

Emerging

Hierarchical Organization



Events



Document Store

LCC's *AQUIRE* dossier generation and management system can be used by analysts to access deep information, gathered from a wide variety of unstructured sources, about entities, relations, and complex situations.

Dossier Viewer

Dossier Search Recent Updates View Dossier

ENTITY(entity): HAMID KARZAI Conf(100%)

Political career

[4] Wary of how warlord militias plunged Afghanistan into a civil war after the Soviet-backed regime collapsed in 1992, Karzai has ordered the dissolution of independent village militias that, though funded by the US, operate outside Kabul's control.
 +[5] Wary of how warlord militias plunged Afghanistan into a civil war after the Soviet-backed regime collapsed in 1992, Karzai has ordered the dissolution of independent village militias that, though funded by the US, operate outside Kabul's control.
 +[10] The claims are based on President Karzai's order—given seven months ago—that said all employees who have served in a company for twelve years must be allotted shelters from the properties of the same of the company.


[3] Karzai reluctantly acquiesced to the ALP initiative in 2010, after receiving guarantees of government control.
 +[21] The U.S. State Department on Monday once again pushed for President Hamid Karzai to sign the Kabul-Washington Bilateral Security Agreement (BSA) as soon as possible.
 +[6] Karzai reluctantly acquiesced to the ALP initiative in 2010, after receiving guarantees of government control.
 +[11] "We don't want the insurgents placing roadside bombs and being active in the district."

Personal life

[20] It also opened a breach of trust between Hamid Karzai and the United States—an early episode of mutual suspicion in what would soon become a cascade."

HAMID KARZAI

URL:



age: 61
 alma mater: Himachal Pradesh University
 nationality: Afghan
 spouse: Zariat Karzai