VAST Challenge 2014

The Kronos Incident
IEEE VAST Challenge 2014 is open for submissions! The VAST Challenge uses the Precision Conference System (PCS) to handle the submission and reviewing process. PCS is available at https://precisionconference.com/~vgtc/. If you do not already have a login for the system you must register first. Once you are logged into your account please choose VAST 2014 Challenge under “new submissions” and follow the instructions.

This year’s VAST Challenge presents three inter-related mini-challenges and an overall Grand Challenge to test your skills. These challenges are open to participation by individuals and teams in industry, government, and academia. We encourage your submissions, and look forward to seeing your innovative approaches to solving these challenges using visual analytics.

Background

Note: This scenario and all the people, places, groups, technologies, contained therein are fictitious. Any resemblance to real people, places, groups, or technologies is purely coincidental.

In the roughly twenty years that Tethys-based GAStech has been operating a natural gas production site in the island country of Kronos, it has produced remarkable profits and developed strong relationships with the government of Kronos. However, GAStech has not been as successful in demonstrating environmental stewardship.

In January, 2014, the leaders of GAStech are celebrating their new-found fortune as a result of the initial public offering of their very successful company. In the midst of this celebration, several employees of GAStech go missing. An organization known as the Protectors of Kronos (POK) is suspected in the disappearance, but things may not be what they seem.

As an expert in visual analytics, you are called in to help law enforcement from Kronos and Tethys assess the situation and figure out where the missing employees are and how to get them home again. Time is of the essence.

The Challenges

Mini-Challenge 1

Mini-Challenge 1 focuses on the disappearance itself. As an analyst, you have a set of current and historical news reports at your disposal, as well as resumes of numerous GAStech employees and email headers from two weeks of internal GAStech company email. You are being counted on to bring law enforcement up to date on the current organization of the POK and how that organization has changed over time, as well as to characterize the events surrounding the disappearance.
Please visit VAST Challenge 2014: Mini-Challenge 1 for more information and to download the data.

**Mini-Challenge 2**

Mini-Challenge 2 asks you to analyze movement and tracking data. GAStech provides many of their employees with company cars for their personal and professional use, but unbeknownst to the employees, the cars are equipped with GPS tracking devices. You are given tracking data for the two weeks leading up to the disappearance, as well as credit card transaction and loyalty card usage data. From this data, can you identify suspicious behaviors? Can you identify people and locations that law enforcement should investigate?

Please visit VAST Challenge 2014: Mini-Challenge 2 for more information and to download the data.

**Mini-Challenge 3**

Mini-Challenge 3 poses a streaming analysis challenge. You will have access to real-time feeds of microblogs and emergency calls. Can you monitor this stream to identify what is happening in the city of Abila and find clues into the disappearance of the GASTech employees?

Please visit VAST Challenge 2014: Mini-Challenge 3 for more information and to download the data.

**The Grand Challenge**

In the Grand Challenge, you are asked to put all the pieces together. Who disappeared? Who was responsible for the disappearance? And what were the underlying motivations for the disappearance?

Please visit VAST Challenge 2014: Grand Challenge for more information.

**Which Challenges Are Right for You?**

All three mini-challenges and the Grand Challenge are well suited to visual analytics researchers and developers with no specialized expertise required.

- **Mini-Challenge 1** involves analysis of text and network data.
- **Mini-Challenge 2** involves geospatial, temporal, and transaction data analysis.
- **Mini-Challenge 3** involves analysis of streaming text. Tools will be provided to help make it easier for you to connect to and test the text stream.
- **The Grand Challenge** combines what you've discovered in all three mini-challenges to put together the big picture. It is ideal for individuals and
teams who have worked on all three mini-challenges.

**Important Information about the VAST Challenge**

Participants are welcome to enter one, two, or all three of the Mini-Challenges and the Grand Challenge. Entries may be submitted by teams or individuals. Anyone not associated with the VAST Challenge Committee may submit an entry.

**Submission deadline is July 8, 2014 at 11:59 pm Pacific Daylight Time (UTC/GMT -9 hours).** Instructions on how to submit your entry can be found on the [VAST Challenge 2014: Submission Instructions](#) page.

Entries will be judged based on the criteria appropriate to the specific Mini-Challenge. Award winners will receive a recognition certificate. Award winning participants will be contacted by August 12, 2014. All participants are also invited to submit a two-page summary of their entry for inclusion in the [IEEE VIS 2014](#) electronic conference proceedings.

All participants are invited to attend the VAST Challenge 2014 Workshop, to be held in conjunction with IEEE VIS 2014 in Paris, France. At this workshop, challenge organizers, participants, and conference attendees come together to discuss their work on this year's Challenge. Award certificates are presented during the workshop. The workshop includes presentations by selected participants, invited speakers, a poster session for the participants, and other activities.

Following the workshop, the submissions will be posted to the [Visual Analytics Benchmark Repository](#). Submissions from previous years can also be found in this repository.

For questions, please email [vast_challenge@ieeevis.org](mailto:vast_challenge@ieeevis.org).

**VAST Challenge Committee Chairs**

- Kris Cook, Pacific Northwest National Laboratory
- Georges Grinstein, University of Massachusetts-Lowell
- Mark Whiting, Pacific Northwest National Laboratory