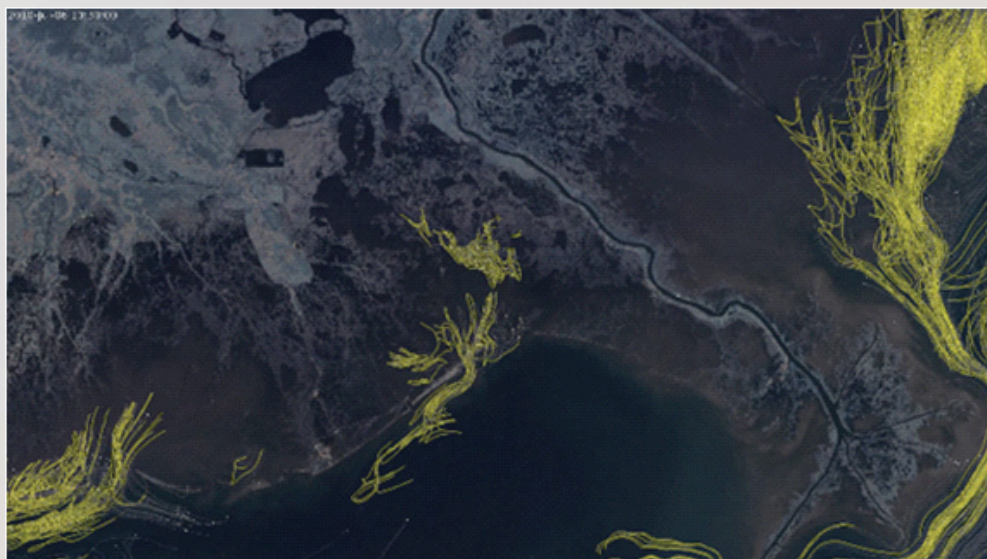


## Getting Ahead of the BP Oil Spill

*University of Texas researchers aid oil spill effort with satellite and supercomputing technologies*

Researchers Gordon Wells and Clint Dawson used advanced computing resources at the Texas Advanced Computing Center (TACC) to observe and predict the movement of the BP Deepwater Horizon oil spill in the Gulf of Mexico.

Gordon Wells with the UT Center for Space Research used Corral to collect, store, and transfer satellite images and other vital data to more than 30 federal agencies coordinating the response effort. These images were made available to first responders as they positioned booms along the shore, directed U.S. Coast Guard ships to the thickest oil plumes, and enabled emergency teams to help preserve property along the coast.



*This image depicts the movement of oil in the Gulf of Mexico. Satellite images were used to initialize the oil position for the simulation and the lines represent the hypothetical paths of the spill based on weather forecasts. The data was visualized by TACC staff using the Longhorn visualization cluster, an NSF TeraGrid supercomputing resource.*

After receiving an emergency allocation of three million computing hours from the National Science Foundation TeraGrid and TACC, Clint Dawson's team used the satellite images to run simulations on the Ranger supercomputer that predicted the movement of the oil spill with 50-meter resolution—up to 20 times more detailed than other models of the spill had produced.

In addition to helping those responding to the emergency, the satellite images and simulations had psychological value. Images of the spill, such as oil-covered birds and underwater footage of the spewing wellhead, were among the most iconic reflections of the event. Moreover, the simulations produced by Dawson and TACC staff were shown on news broadcasts across the country, alerting the nation to the ecological significance of the spill.

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