Public Outreach Achievements

- Over 100 novice drivers
- Over 50,000 visitors by end of mission
- Carnegie Science Center public exhibit - displayed images to general public during entire Trek using immersive and interactive display
- Rover TV - Pittsburgh residents viewed imagery on TV and drove with the telephone
- Project web pages: CMU, NASA, Entel, PUC (live images) - telemetry logs were available immediately on the web
- News coverage; worldwide TV, newspapers, magazines

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Scientific Achievements

- Longest remote science traverse: 1.3 km, stopped at 10 sites
- Panospheric camera and high bandwidth comm enabled fast and effective remote science
- Geologists convinced of the viability of telescience
- Simulated 5 planetary analog missions
- Validated meteorite sensors; vision and metal sensors found in-situ meteorites

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Nomad: Technical Achievements - 2

Panospheric

- First time using immersive imagery for remote driving
- Over 1,000,000 images transmitted at 1Hz or better

Patterned search

- 50+ km of precision control

Meteorite detection

- Nomad detected planted meteorites
- Sensors discovered in situ meteorites, remote science

Skyline navigation

- Location to 300m in 1600 sq km region

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Nomad: Technical Achievements

Locomotion:

- 200km+ traverse; max of 24.2 km in one day

Pointing

- 1.5Mb/s up to 10km from mobile robot

Autonomy

- 21km with built-in obstacle detection at 43 cm/s

Safeguarding

- 7.0km of safeguarded remote control at 43 cm/s

Communication

- 1.5Mb/sec satellite network from mobile robot
- 16hrs/day (several days 24 hrs/day)
- Stations in Santiago, Pittsburgh, Mountain View

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Atacama Desert Trek Summary

221 km of remote operations, i.e. over satellite link

117 km	from CSC Drivers
63 km	from CSC Farming (including 6km of waypoint)
18 km	from NASA Ames
2 km	from Santiago
21 km	via Autonomy

(7.0 km of teleop was safeguarded)

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Nomad Achievements

- Freed planetary explorers from the grip of lander proximity
- Freed planetary exploration from the exclusivity of technical experts
- Executed longest off-road robotic traverse

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