Automotive X PRIZE Education Program

Mark German
X PRIZE Foundation
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Project ID #
ti_12_german

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Overview

Timeline
• Project start date: 9/1/08
• Project end date: 11/30/10
• Percent complete: 35%

Budget
• Total project funding
  – DOE share: $3,504,686
  – Contractor share: $0
• Funding received
  – FY08 (BP1 = 9/1/08-1/31/09): $499,324
  – FY09 (BP2 = 2/1/09-1/31/10): $475,000 (of $1,488,574)

Barsiers
• Barriers addressed
  – [None applicable]

Partners
• Discovery Education
  – Online Interactive Knowledge Center
• Widmeyer Communications
  – National High School Student Contest
• Saint Louis Science Center & C. Fox Communications
  – Competition Host City Educational Events
• More to be identified
  – Vehicle Telemetry
Objectives: Project Goals*

- To engage students & the public in learning about advanced vehicle technologies, energy efficiency, climate change, alternative fuels, & the science, technology, engineering, & math behind efficient vehicle development
- To inspire youth to learn more about & pursue careers in advanced vehicle development
- To generate enthusiasm about the energy-efficient vehicle options of the near-future
- To showcase the 21st century learning skills needed to succeed in work & life, including creativity & innovation, critical thinking & problem solving, communication & collaboration

*Note: This grant supports the education component of the Progressive Insurance Automotive X PRIZE (http://www.progressiveautoxprize.org/). The goal of the Progressive Automotive X PRIZE is to inspire a new generation of viable, super fuel-efficient vehicles that offer more consumer choices. Ten million dollars in prizes will be awarded to the teams that win a stage competition for clean, production-capable vehicles that exceed 100 MPGe.
Objectives: Project Components

- **Online Interactive Knowledge Center** = [www.FuelOurFutureNow.com](http://www.FuelOurFutureNow.com)
  - Contains educational content, tools, resources, & programming in multiple formats for K12 students, teachers, parents, & the general public
  - Features a vehicle telemetry-based experience with eco-feedback indicator

- **National High School Student Contest**
  - Challenges teams to imagine the role of transportation in their future
  - Involves expert judging & online voting
  - Yields regional & national winners to be part of competition host city exhibitions

- **Competition Host City Education Events**
  - Provides opportunities for students of all ages to participate in contests, parades, expos, & other events at science centers, museums, & community festivals
  - Encourages youth to learn more, take action, & contribute to local service-learning projects
  - Includes student reporters covering the events
Objectives: Current Year

• The launch of an online knowledge center (www.FuelOurFutureNow.com) to provide comprehensive resources easily accessible to students, teachers, parents, & all who have a curiosity to learn more about the Progressive Automotive X PRIZE
• Ongoing maintenance, updates & additions to the online knowledge center
• Launch of a national contest to harness student creativity, inviting teams of high school students to imagine what the role of transportation will be in their future world
• The detailed specifications of vehicle telemetry requirements & eco-feedback indicator
## Milestones: FY2008*-2009

<table>
<thead>
<tr>
<th>Month/Year</th>
<th>Milestone or Go/No-Go Decision</th>
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<tbody>
<tr>
<td>1/09</td>
<td>Completed Task 1: Specification &amp; design of online knowledge center</td>
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<tr>
<td>1/09</td>
<td>Completed Task 2: Development of online knowledge center website infrastructure</td>
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<tr>
<td>1/09</td>
<td>Completed Task 3: Creation of content &amp; partnerships for online knowledge center</td>
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<tr>
<td>1/09</td>
<td>Completed Task 4: Quality assurance, launch &amp; performance tracking of online knowledge center</td>
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<tr>
<td>3/09</td>
<td>In progress Task 5: Vehicle telemetry sub-system data design</td>
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<tr>
<td>3/09</td>
<td>In progress Task 6: Refine specifications for eco-feedback indicator</td>
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<tr>
<td>Ongoing</td>
<td>In progress Task 7: Ongoing content creation, refresh &amp; maintenance of online knowledge center</td>
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<tr>
<td>3/09</td>
<td>In progress Task 8: Design goals of a high-school national contest &amp; create preparatory materials for student teams</td>
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<tr>
<td>3/09</td>
<td>In progress Task 9: Design processes &amp; criteria for judging of student entries</td>
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<tr>
<td>9/09</td>
<td>Not started Task 10: Announce national contest &amp; promote to students, teachers &amp; parents</td>
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*Note: As the grant started on 9/1/08, there was only one month of activity during FY2008.*
Approach

- Initiated a competitive request for proposal process to identify sub-recipients & vendors to develop educational tools, resources, & programming in multiple formats; this yielded proposals from 9 content & 5 telemetry organizations, including selected partners:
  - Discovery Education, with 35 million students & 1 million teachers engaging with their K-12 videos, virtual labs, interactives, & related content daily
  - Widmeyer Communications, who specialize in public affairs campaigns, including Stop Bullying Now! for the US Department of Health & Human Services
  - Saint Louis Science Center, whose Science Beyond the Boundaries Network reaches 33 million science center visitors at over 100 museums worldwide
  - C.Fox Communications, who provides strategic communications counsel, media relations, writing, & creative services to major trade organizations, foundations, Embassies, & Fortune 100 companies
Technical Accomplishments/Progress/Results

• Online Interactive Knowledge Center (www.FuelOurFutureNow.com) went live on 1/31/09
Technical Accomplishments/Progress/Results

• Formal website launched at the Washington Auto Show on 2/3/09
  – Introduced by David E. Rodgers, Director for Strategic Planning & Analysis at the US DOE Office of Energy Efficiency & Renewable Energy
  – Press release was issued to consumer automotive press
  – Website demo was on display
  – Web cards were distributed to interested parties

• National High School Student Contest Design Session held with program partners in Washington, D.C. on 3/16/09
Future Work: Curriculum Launch at NSTA

• Grades K-12 curriculum (250+ pages) will be introduced to educators during an interactive workshop on 3/21/09
  – K-2 will be challenged to find out what makes cars go
  – 3-5 will focus on building the skills needed to learn about force & motion & efficient energy transfer within a vehicle
  – 6-8 will investigate fuel efficiency & develop a futuristic, energy efficient vehicle
  – 9-12 will be tasked with analyzing patterns in mass transit usage
• Booth presentations will be conducted
• Press release will be issued
• Postcard will be distributed
## Future Work: Milestones, FY2009-2010

<table>
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<tr>
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<tr>
<td>1/10</td>
<td>Task 11: Complete judging of student entries in national contest</td>
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<tr>
<td>4-9/09</td>
<td>Task 12: Design telemetry-based Internet experience</td>
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<td>10-12/09</td>
<td>Task 13: Implement telemetry-based Internet experience version</td>
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<tr>
<td>10/09-9/10</td>
<td>Task 14: Ongoing content creation, refresh &amp; maintenance of online knowledge center</td>
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<tr>
<td>5-8/10</td>
<td>Task 15: Implement telemetry-based Internet experience version 2 &amp; operate during the competition</td>
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<tr>
<td>9/10</td>
<td>Task 16: Implement post-competition telemetry analysis</td>
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<tr>
<td>5-8/10</td>
<td>Task 17: Host educational activities during the local host city events of the competition</td>
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<tr>
<td>5-8/10</td>
<td>Task 18: Promote local educational activities during the local host city events of the competition to a national audience</td>
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Summary

• All milestones & deliverables to date have been met on-time & on-budget, despite an aggressive timeline due to longer-than-expected grant process, resulting in the compaction of development calendar by 1 month
• Outstanding sub-recipients & vendors identified through competitive RFP process
• Online Interactive Knowledge Center (www.FuelOurFutureNow.com) successfully launched
• Cost-effective vehicle telemetry-based experience with eco-feedback indicator solution being developed
• National High School Student Contest is in design & on-track for a Fall 2009 announcement
• Well positioned for future grant deliverables, including competition host city education events