Executive Summary

The National Hispanic University serves the under-served community, and a Sustainable Broadband Application will provide funds in accordance with BTOP’s statutory objectives.

Peer Plus One, National Hispanic University, and the University of Denver request funds for a project that will (a) engage hundreds of thousands of students from educationally underserved communities in STEM studies, increasing the number entering STEM careers; (b) create linkages between students across the digital divide by encouraging mentorship (peer to peer+1 connections), (c) create millions of internships and jobs with a business model similar to LinkedIn, and (d) be sustainable as a result of revenues generated, as well as strong user adoption.

Our project offers an especially innovative approach to increasing broadband adoption by targeting young people who are arguably the most keen to gain access to broadband. Further, we specifically choose to focus on under-represented populations, both because it is morally right, and also because they represent the fastest growing demographics in the United States. It is imperative that any effort to expand broadband specifically include these growing under-represented populations. Young people are keenly interested in games, and the P4games project at the University of Denver has shown that this interest can be directed into true STEM education through the use of CREATING computer games. Game creation allows young people to have a voice and to create something they are passionate about. By offering game creation as a vehicle for expressing themselves we generate true interest. Teaming with the National Hispanic University allows us to test our approach and get constructive feedback from critical, intelligent, and people truly dedicated to giving a voice to Latinos and other under-represented populations. Our social network system provides an innovative mechanism to potentially scale to millions of young learners. We believe we have the innovative and attractive content, buy-in from leaders of under-represented population education, and a new social network system to enable peer-to-peer mentoring and viral adoption.

Additional objectives include:
a) To engage millions of students nationwide (under-served and otherwise) into creating connections with gifted students who might be slightly senior ("peer + 1"), and learning from their experiences. A "peer+1" is essentially a mentor, someone who has "been there done that."

As an example, a gifted student who has just gone to college may encourage an under-served (or otherwise) high school student to do the same. She could share her experiences on how to seek financial aid, the colleges she researched, etc. There is a wealth of knowledge in the "peer+1" group that can be tapped by under-served as well as other students. It's especially helpful if a student cannot get the same kind of awareness from her environment.

b) To create an army of student mentors, and help them develop into experts and mavens, and increase their market value.

c) To help employers harness the large pool of talent among students and recent graduates.

d) To enable easy authoring of Mathematical formulae on the web.

Business (in order to be sustainable beyond the grant period):

a) Provide employers a high quality and effective medium for finding passive employees.

b) Provide advertisers a high quality and effective medium for reaching users.

Under reasonably conservative assumptions, details of which are provided in an attachment, the revenue projections are:

(Year-1: $228K, Year-2: $3M, Year-3: $23M, Year-4: $44M, Year-5: $76M)

The enterprise will be profitable on Year-3.

Given that Facebook is very popular, and allow for Facebook Connects, the number of users reachable through viral mechanisms is in the millions.

The cost of acquisition of a user in such an environment is miniscule.

Sponsored by NSF and others, P4Games is an innovative Univ collaboration among faculty in CS, Art, and Education that uses the creation of videogames as a holistic, project-based teaching method to engage students in STEM-related classes. As of August 2009, P4Games has trained 46 high school and middle school teachers, directly educated 135 students in one or two week "game camps", and indirectly educated more than 600 students through our teachers delivering variants of the P4games curriculum in their schools.
P4Games mission is to combine inherent student game interest with a STEM-based curriculum that teaches students to create their own games, thereby helping to reverse the national decline of students interested in STEM-related majors and careers. A perhaps more fundamental goal is to give students a fun and challenging virtual environment to create something personal that gets them excited about learning. P4Games operates primarily in the Denver Public Schools (DPS) district at this time. DPS is comprised of under-represented low socio-economic status populations. As of October 2008 DPS student membership was 55.36% Latino, 17.50% Black, 3.41% Asian, 1.11% American Indian, and 22.62% White. Further, 65.93% of the students qualify for free/reduced lunches. Over half of our camp participants have been young women, and the majority of students have been students of color, the vast majority of whom will be first generation college students when they matriculate.