1. Briefly summarize your proposed project in one sentence.

Digital StudyHall (DSH), a project that was started in India to help improve education for poor children, is a community-based video production and sharing system that allows the best grassroots teachers to be filmed teaching under-served children and have the resulting DVD films distributed to poor rural and slum schools where participating teachers use the films in their classrooms to provide high-quality instruction to their students and train themselves.

2. Describe your idea in more depth.

The Digital StudyHall project (DSH) seeks to improve education for poor children in rural and slum schools in India. One may think of it as the educational equivalent of "Netflix meets YouTube." The best grassroots teachers and other volunteers are filmed as they teach the local state curriculum in their local languages, while practicing the best interactive pedagogy; the community video processing stations pool these contributions into a networked database; from there, lesson videos are compiled into coherent sequences and burned onto DVDs; these DVDs are shared with poor schools, which are given TVs, players, and electrical equipment (such as batteries recharged in rural charging stations) to play the discs; not relying on passive TV-watching, teachers at these recipient schools, though less knowledgeable, are trained to actively "mediate" the video lessons by imitating and embellishing the activities contained in the videos during pauses. In this process, the students benefit from a pair of teachers: a "virtual" teacher that knows the subject matter well and practices the best pedagogy in a well-designed lesson plan, plus a "real" local teacher who supplies the crucial human element of interaction. This model helps train the local teachers and deliver quality instruction to underprivileged children. Those recipient teachers who have shown the greatest improvement participate in future filming, and see their own lessons used by even more peers. The videos can also be used in other settings such as teacher training institutes, where specific real-world examples of good teaching is especially lacking. Complementing the community video-sharing system is a shared voice and SMS system that serves roles such as quizzes and voice blogging that shares teachers' experiences and advices, giving physically isolated participants a sense of connectedness with a larger community.

3. Results so far.

Digital StudyHall has been piloting at small scales in several cities in India and Bangladesh in the past three years. In a recently published preliminary six-month evaluation of a small-scale deployment, DSH demonstrated that average student scores increased 174% over a six month period, 32% of the children increased their scores by more than 200%, DSH school children scored 381% higher in English midterm tests and 297% higher in math than their counterparts in a non-DSH control school. In addition to a dramatic rise in test scores, the local teachers demonstrated significant improvement in their grasp of subject matter as well as pedagogical skills, and the classrooms showed significantly increased student participation.

As of fall of 2008, we run pilot "hubs" in Lucknow, Calcutta, Pune, and Dhaka, covering approximately 30 schools. And during this time, we have accumulated more than 1500 recordings of lessons in English, math, and science, in Hindi, Bengali, Kannada, Marathi, Tamil, and English, and 1500 additional videos of other materials such as stories, special science and history topics, and training sessions. We have also started applying the same approach to agriculture extension work (Digital Green) and awareness campaign
for rural healthcare (Digital Polyclinic, operating in Lucknow and Ghana).

DSH won the 2007 ACM Eugene Lawler Award for Humanitarian Contributions within Computer Science and Informatics, and the top prize in the education category of the 2008 Tech Awards by the Tech Museum of Innovation.