US Ignite Gigabit Application Generator

Use the generator below to help spark a gigabit application ideas! Some sample ideas include an application listed in the US Ignite Application Registry (https://www.us-ignite.org/) that represents just one way to address part of that need, but more solutions are needed in almost every area.

Two or more people in different places need to simultaneously and collaboratively _____

- perform music (LOLA)
- exercise with coordinated movements (Fitnet)
- examine and manipulate 3D objects (PlanetIT Impact)
- interactively view the similar sections of a big data set (or larger)
- have a natural conversation or distributed meeting as if you were together (Ultragrid, SightDeck)
- teach and learn in a virtual environment (Solar education, VR Medical Campus)
- Annotate 360 degree video environments. (PanoVR)
- Adjust planning data interactively and visualize the results of their changes.
- pair program manufacturing or educational robots and have them act in real-time. (Gigabots, Materials Manufacturing)

Expand the capabilities of low-end devices by using off-site resources over high speed networks and edge-compute to connect _____

- VR headsets for experiential education
- domestic robot swarms for interactive education or home monitoring
- health and safety monitoring systems for senior citizens (Elder Care as a Service)
- 3D modeling systems to fabrication facilities
- shoppers to recommendation engines provide feedback in real-time at point of purchase (Electronic Double Up Food Bucks)

Use big-data from hubs, archives or field devices for better decision making or education by _____

- merging and visualizing civic and engineering data to plan for increased energy efficiency (PlanIT Impact)
- merging and visualizing meteorological data with real time pollution sensors (LEaRN, GASP)
- modeling city data in a collaborative augmented reality environment.
- retraining machine learning algorithms to form dynamic AI systems.
- overlaying layers from multi-spectrum surveys for better land use or monitoring of infrastructure.
- detecting floods in real-time and advise area residents to seek safety or of unsafe travel routes.
- analyze drone footage to help find a missing person or monitor infrastructure.

Provide unprecedented levels of detail through the use of low-latency streaming 4k Video to _____

- provide high quality real-time microscopy to classrooms (4K microscope)
- provide real time control over telescopes for sky observations to classrooms.
- stream interactive 360 degree video for collaborative analysis. (PanoVR)
- connect mental health professionals with patient remotely at high frame rate
- teach lip-reading or body language analysis.

Enable real-time interactive control of _____

- robots that enable them to act quickly in real-time with their environment.
- connect mental health professionals with patient remotely at high frame rate
- surgical robots so doctors can assist in critical procedures remotely. (Da Vinci Machine)
- simulated environments to enable experiential education in surgery, energy, public safety or other high skill fields.
- implanted medical devices to tailor therapy to patients schedule and reduce the need for expensive travel to medical centers. (Deep Brain Stimulation.)

Enable unprecedented levels of security or enable direct interaction by _____

- building a Software Defined Network that isolates IoT arrays from the public internet.
- provide direct connections between area compute clusters to build a distributed super-computer.
- isolating critical infrastructure like public safety networks or power grids to allow systems to only interact internally.