

TCIP FY2104 Round 1 - Grant Awardees

Institution	Licensee/ University	Cluster	Application Title	DESCRIPTION OF TECHNOLOGY
BYU	Licensee	Energy	PWTS	<p>The Portable Waste Treatment System (PWTS) is a patented technology designed to treat human waste and mitigate disease proliferation while providing small-scale power generation at a minimal financial cost. Mounted on a portable platform (truck trailer) for humanitarian, disaster, or military applications or permanently installed to treat animal waste and produce energy at confined animal operations, the System functions both as a human waste treatment plant and a small-scale renewable energy system. The System facilitates waste transformation into biomethane, which is then filtered for small-scale energy production or heating. Compost, a valuable soil amendment, is the only byproduct created by the process.</p>
U of U	Licensee	LS	SC Reprogramming	<p>This technology reprograms adult human and animal cells into stem cells which are pluripotent in a process that takes days to perform. The current standard approach for this process currently takes months. In addition, because of the our improved process, the cells that are obtained are much more uniform and provide improved quality over current approaches. Also because of the improvements provided by our process, researches and clinicians can perform many more cell line reprogramming procedures; our process even allows patient specific cell line development which currently is not po. Such individual cell lines potentially enables new approaches to the implementation of personalized medicine in a manner that is not currently feasible.</p>

USU	Licensee	IT	CityGro	<p>CityGro produces customer interactive kiosks for business using both IOS and Android platform technology. With the relatively recent emergence of Tablet Technology, it was only a matter of time before tablets would be utilized to help businesses interact with their customers. CityGro has found itself on the forefront of this wave and now has the most customizable interactive kiosk on the market. The technology works by placing an IOS or Android tablet near a businesses point of sale system. From their it can be customized for capturing customer data, digital loyalty programs, digital signature waivers, coupon distribution, advertising, and much much more.</p>
USU	Licensee	IT	ISQ Inc.	<p>ISQ has a technology licensed from Utah State Univ. that collects student feedback about events related to the learning environment in the classroom. This feedback is at the teacher level and rolls up to subject matter in middle and high school settings. New accountability mandates going into effect 2014 in Utah and other states require specific student and parent feedback about each teacher in K12 schools. These mandates and measures are a response to federal regulations. This creates a unique need for collection of perceptions and events data on classrooms.</p>
BYU	Licensee	MMEE	Open Air Compos	<p>We are utilizing BYU's patented IsoTruss structure in a carbon fiber bike application to create a bike that is lighter, stronger, and more compliant than any other bike on the market. The properties of the IsoTruss design are unique and are what allow us to achieve these functional results that result in superior bike. These claims are all confirmed by world and Olympic champion bike racers.</p>

U of U	Licensee	LS	IJ-180	<p>Our team has developed a prototype of a direction-reversing clamp for a central venous catheter (CVC) placed in the internal jugular of a patient. Our device, called the “IJ-180,” is a “U”-shaped catheter-holding clamp. The catheter is placed into the lumen of the clamp immediately at the point at which it exits the skin, and the clamp is sutured onto the patient’s skin. The IJ-180 reverses the direction of the IJ catheter 180 degrees and places the catheter ports on the chest of the patient away from the hair and neck, which reduces catheter infections, increases patient comfort, and makes access and dressing maintenance easier.</p>
U of U	Licensee	IT	Asthma Tracker	<p>Asthma Tracker (“AT”) is patent-pending technology that reduced recurring ER visits by 98% among child asthmatics in a clinical study. AT reduces recurring emergency room visits and hospitalizations by tracking symptoms and closing the surveillance treatment gap and notifying physicians of progress for patients suffering from asthma. AT helps patients take control of their disease, which reduces the chance that they will need expensive and often-life threatening ER visits and hospitalization. AT is the only available technology that seamlessly integrates tracking, notification, and scoring, and is based on clinical research conducted at the U of U and Primary Children’s Medical Center.</p>
U of U	University	IT	THz Technology	<p>“Terahertz technology is an emerging field that promises to improve a host of useful applications, ranging from passenger scanning at airports to huge digital data transfers. Terahertz radiation sits between the frequency bands of microwaves and infrared radiation, and it can easily penetrate many materials, including biological tissue.” Graphene is in ideal material for this application and can be grown or cut to specifications in the Terahertz range.</p>

U of U	University	MMEE	Multispeclmager	Most imaging applications only utilize the visible red-green-blue spectrum while absorbing the remaining electromagnetic radiation into the lens. This methodology wastes the majority of available information, which renders a RGB image useless in many common conditions such as low light, dust, clouds, vegetative obstruction, etc. DARPA has set a cost goal of \$3,300/unit at 120,000 units/year for high quality versions of these multispectral filters. However, we can also address simpler applications like cell phone cameras, which opens up a huge \$15 B market in addition to another \$3 B in industrial/agricultural inspection applications.
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