

Future Funding Proposal

Executive Summary

Enabling Technology: Collaborative Design for the Future

Background:

Almost all Americans use technology on a daily basis to increase their physical comfort, to travel across long distances, to connect with others, to entertain themselves, to enable them to reach goals, and/or to overcome environmental barriers. Technology provides tools that can improve quality of life and productivity for everyone, including people with developmental disabilities. Some of the technological tools most frequently used by people with developmental disabilities are specialized and disability-specific – these typically fall in the category of “assistive technology.” However, many of the tools that improve the quality of life for people with developmental disabilities are generic; they are the same products widely used by consumers with diverse characteristics who don’t necessarily have disabilities. Examples of this type of technology include cell phones, subtitles for language translation, voice-recognition software; global positioning system (GPS) satellite tracking that helps people navigate city streets; talking books; computers; and the internet (including social networking technologies). Additionally, technology is being developed for specific uses not necessarily related to disability, such as robotic tools that are operated remotely; long-range monitoring and sensing equipment; and microchip-enhanced cards (or wearable items such as wristbands) that contain information, allow access to restricted areas, or serve as cashless debit cards.

Although an obvious financial benefit exists to ensuring that new technology being marketed to the general public appeals to and/or meets the needs of people with developmental disabilities, this group is not often considered a target market and is rarely taken into account during the development of these products. However, this may change as technology companies strive to stay competitive by being responsive to the changing needs and desires of baby boomers who are aging and of soldiers who have returned from Iraq with significant disabilities. Companies that develop devices for the “typical” public will be confronted with the reality that more and more “typical” people have disabilities, including individuals who acquire a disability as part of the aging process. Forward-thinking, successful technology-focused companies may realize that tweaking their existing products or building accessibility into the initial design of new products will result in a broader customer base – especially if the increased manufacturing and availability of these products results in a cost reduction for individuals.

Currently, the input of people with developmental disabilities frequently is not valued – nor even solicited - in the initial design of new technology that is intended for the general public. Instead the development of and funding for “assistive technology” typically occurs separate from the development of technology for the general public, and technology developed for the general public frequently has to be adapted after the fact for use by people with developmental disabilities. There would be tremendous benefit for the developers of new technology to consult - early in the design process - with people who have developmental

disabilities or who have family members who have developmental disabilities. A person who has lived a full life with a disability frequently has had to become very creative at finding ways to meet their needs with whatever is available to them. Many have a lot of expertise at “making things work” and know what is more or less likely to be helpful. Designers may find that collaboration with people who have developmental disabilities enables them to create technology that is more functional and appeals to a wider range of people. For example, there are agencies that support people with developmental disabilities to live semi-independently by using commonly available monitoring and communication devices to enable their clients to do more in their own homes with less intrusion by direct support staff. This same type of technology might interest parents of “latch-key kids” were they aware of its existence. Simple robots – such as those that vacuum or entertain – are now widely available, and that technology could be used to create robots that “fetch” items for people with mobility impairments. Cell phone, voice recognition, and GPS technology, if adapted to be simpler and easier to use, might enable a person who has a cognitive disability to move around their neighborhood or city more independently.

The Texas Council for Developmental Disabilities (TCDD) would like to explore how collaboration between companies that develop or produce technology and people who have developmental disabilities might enable developers to increase their creativity in designing new technology. As a part of this effort, TCDD intends to demonstrate how those devices might enable people to live more independently and to reach personal goals.

State Plan Goal and Objective:

Goal 10: People with developmental disabilities and family members will have the supports and services they need to be able to participate actively in their communities.

Objective 7: Explore and promote new technologies, multi-media tools, assistive equipment, and/or barrier removal/home modifications that may enable people with developmental disabilities to live more independently within local communities and/or to participate more fully in advocacy efforts, by September 30, 2011.

Expected Outcome(s):

TCDD will facilitate exploration and/or demonstration of the benefits of using new technology – or using “old” technology in an innovative way – to support the independence of people with developmental disabilities.

TCDD will promote collaboration between people with developmental disabilities and developers of affordable, widely available, technology.

Project Description:

This project will require a partnership between at least two entities:

1. One must have considerable experience in developing and/or providing reliable technology for individuals or companies to improve quality of life, to facilitate effective communication between individuals, or to improve business practices.
2. One must have considerable experience providing support and/or services to people with developmental disabilities and/or their families.

The partnership may involve additional organizations. People with developmental disabilities and/or their family members must be involved in the project design, implementation, and evaluation. Although one partner must be designated the lead applicant to receive grant funds and to comply with all reporting requirements and assurances, the partners should contribute equally to the creative process, making maximum use of their strengths.

The partners will work together to implement an innovative model demonstrating how technology can be used, in a cost-effective way, to enable people with developmental technologies to have increased independence in their daily lives. A model may be considered “innovative” if it is not currently in existence in Texas but has been demonstrated to be effective – and may even be widely used – in other states or countries to support people with developmental disabilities.

The project must serve at least 10 people (plus their families, if relevant) and must be committed to ensuring that participants will continue to receive the same level of service/support after TCDD funding has ended. The project may serve more than 10 people, and the additional people reached may include people without developmental disabilities if the intent is to demonstrate that the same product would have a wide range of potential users. TCDD expects that this project will show how “generic” technology might be employed to support people with developmental disabilities and also appeal to a diverse market, so that for-profit companies might aspire to produce the product on a wide-scale basis, at an affordable cost to individuals.

The partnership must ensure that an evaluation of the project is provided to TCDD upon project completion. The evaluation should include benefits and drawbacks as perceived by the individual served and by all project partners, as well as a discussion of possible implications (both positive and negative) of wide-spread implementation of the project.

Applicants will be responsible to develop and outline the type of project proposed and provide information to support the probable success of the project. Applicants are encouraged to be creative in the development of a project idea; TCDD fully intends to demonstrate a new, or relatively unknown, approach and may choose not to fund any proposal if none meet this requirement. Examples of the types of projects that would be considered appropriate to be funded under this RFP include:

1. The use of remote monitoring/sensing technology, accessible communication equipment, and professional direct care staff to support – as non-intrusively as possible - individuals with developmental disabilities living in their own homes.
2. The creative use of robots to reduce reliance on other individuals or to enable individuals with developmental disabilities to exert more control over their environment.
3. An expansion of the availability and successful use of social connectivity technology to individuals who have not had access previously (for example, individuals living in institutions) in such a way as to bring about significant and tangible changes in their daily lives.

4. The demonstration of how face recognition software and/or gaming technology may support or develop skill in recognizing and responding appropriately to social cues for people who need this type of assistance due to a disability.
5. The development of a model to promote interest in university students in engineering, computer science, or other related disciplines, by creating an annual “enabling technology” design competition.

This list is intended to serve as examples only and is non-inclusive. Applicants may choose to develop one of these ideas into a project or may submit a proposal entirely unrelated to any of these examples.

Proposed Funding Amount:

Because of the range of types of projects that might be proposed under this RFP, the Council is not committed to providing a set amount of funding for any particular project. If multiple proposals are viewed favorably, the Council may choose to fund several promising projects if they require relatively small amounts. The Council may also decide to fund one project for the full amount. However, the Council will not fund any single project, or combination of projects, for more than \$200,000 per year, total.

Proposed Duration:

TCDD funding would be offered for up to 5 years subject to annual review of project accomplishments.

Other Considerations: