

DEPARTMENT OF EDUCATION**Rehabilitation Engineering Research Centers (RERC) Program**

AGENCY: National Institute on Disability and Rehabilitation Research (NIDRR), Office of Special Education and Rehabilitative Services, Department of Education.

ACTION: Notice of final priorities.

SUMMARY: The Assistant Secretary announces final priorities for up to five Rehabilitation Engineering Research Centers (RERCs). The Assistant Secretary may use one or more of these priorities for competitions in fiscal year (FY) 2002 and later years. We take this action to focus research attention on areas of national need. We intend these priorities to improve the rehabilitation services and outcomes for individuals with disabilities.

EFFECTIVE DATE: These priorities are effective on July 19, 2002.

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If you use a telecommunications device for the deaf (TDD), you may call the TDD number at (202) 205-4475.

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SUPPLEMENTARY INFORMATION:**Description of Rehabilitation Engineering Research Centers**

RERCs carry out research or demonstration activities by:

(a) Developing and disseminating innovative methods of applying advanced technology, scientific achievement, and psychological and social knowledge to (1) solve rehabilitation problems and remove environmental barriers and (2) study new or emerging technologies, products, or environments;

(b) Demonstrating and disseminating (1) innovative models for the delivery of cost-effective rehabilitation technology services to rural and urban areas and (2) other scientific research to assist in meeting the employment and independent living needs of individuals with severe disabilities; or

(c) Facilitating service delivery systems change through (1) the development, evaluation, and

dissemination of consumer-responsive and individual and family-centered innovative models for the delivery to both rural and urban areas of innovative cost-effective rehabilitation technology services and (2) other scientific research to assist in meeting the employment and independence living needs of individuals with severe disabilities.

Each RERC must provide training opportunities in conjunction with institutions of higher education and nonprofit organizations to assist individuals, including individuals with disabilities, in becoming rehabilitation technology researchers and practitioners.

We make awards for up to 60 months through grants or cooperative agreements to public and private agencies and organizations, including institutions of higher education, Indian tribes, and tribal organizations, to conduct research, demonstration, and training activities regarding rehabilitation technology in order to enhance opportunities for meeting the needs of, and addressing the barriers confronted by, individuals with disabilities in all aspects of their lives. An RERC must be operated by or in collaboration with an institution of higher education or a nonprofit organization.

Centers of Excellence

RERCs are expected to function as Centers of Excellence. The NIDRR Centers of Excellence Model identifies four major areas in which centers are expected to excel: (1) Scientific research and development; (2) capacity building and training for research and development and practice; (3) relevance and productivity (including dissemination); and (4) administration and evaluation. RERCs must develop consumer and industrial partnerships to ensure the relevance and appropriateness of research directions and to transfer research-generated knowledge into commercial products. Each RERC must operate as part of a national network and extend beyond the boundaries of its programmatic objectives to become a leader in its field, attract new research dollars, and significantly improve the education of professionals, consumers, and manufacturers. For information about NIDRR's Centers of Excellence Model, applicants are invited to visit the following website: <http://www.cessi.net/pr/RERC/Summative/CoEmodel.html>

Program Review

RERCs are required to participate in NIDRR's program review process. Program review is a key element in

NIDRR's quality assurance, performance monitoring, and evaluation and provides an opportunity for staff and key stakeholders to interact with grantees and provide feedback on center activities. As part of this evaluation system, NIDRR conducts both formative (early in the five-year funding cycle) and summative (toward the end of the fourth year) reviews. The overall goal of the formative review is to support grantees in becoming centers of excellence across the four major areas. The overall goal of the summative review is to evaluate the quality and relevance of each center's accomplishments and results.

In accordance with the provisions of 34 CFR 75.253(a), continued funding depends at all times on satisfactory performance and accomplishment.

These priorities reflect issues discussed in the New Freedom Initiative (NFI) and NIDRR's Long-Range Plan (the Plan). The NFI can be accessed at: <http://www.whitehouse.gov/news/freedominitiative/freedominitiative.html> The Plan can be accessed at: <http://www.ed.gov/offices/OSERS/NIDRR/Products>

We published a notice of proposed priorities for the Rehabilitation Engineering Research Centers (RERC) Program in the **Federal Register** on March 12, 2002 (67 FR 11204).

Except for minor revisions, there are no differences between the notice of proposed priorities and this notice of final priorities.

Generally, we do not address technical and other minor changes and suggested changes the law does not authorize us to make under the applicable statutory authority.

In response to our invitation in the notice of proposed priorities 21 parties submitted comments. We fully explain these changes in the Analysis of Comments and Changes elsewhere in this notice. We group major issues according to subject.

Note: This notice does not solicit applications. A notice inviting applications is published in this issue of the **Federal Register**.

Priorities*Background*

Technology plays a vital role in the lives of millions of disabled and older Americans. Advances in assistive technology and adoption of principles of universal design have significantly improved the quality of life for these individuals. Individuals with significant disabilities regularly use products developed as the result of rehabilitation and biomedical research to achieve and

maintain maximum physical function, live independently, study and learn, and attain gainful employment. The range of engineering research has broadened to encompass not only assistive technology but also technology at the systems level (i.e., the built environment, information and communication technologies, transportation, etc.) and technology that interfaces between the individual and systems technology and is basic to community integration.

The NIDRR RERC program has been a major force in the development of technology to enhance independent function for individuals with disabilities. The RERCs are recognized as national centers of excellence in their respective areas and collectively represent the largest federally supported program responsible for advancing rehabilitation engineering research.

For example, the RERC program was an early pioneer in the development of augmentative communication and has been at the forefront of prosthetics and orthotics research for both children and adults. A recently established RERC is responsible for designing prosthetics for land mine survivors from developing countries using indigenous materials and fabrication capabilities. The RERC on Telerehabilitation is developing methods for the efficient delivery of rehabilitation services in rural settings and to reduce the cost of long-term care.

RERCs have played a major role in the development of voluntary standards that industry uses when developing wheelchairs, wheelchair restraint systems, information technologies, and the World Wide Web. The RERC on Low Vision and Blindness helped develop talking sign technologies that are currently being utilized in major cities in both the United States and Japan to help blind and visually impaired individuals navigate city streets and subways. RERCs have been a driving force in the development of universal design principles that can be applied to the built environment, information technology and telecommunications, transportation, and consumer products. The clinical use of electromyography, gait analysis, and functional electrical stimulation has been made possible due to earlier research supported by the RERC program.

Significant financial investments in basic biomedical science and technology are paying off with new opportunities to further enhance the lives of people with disabilities. Recent advances in biomaterials research, composite technologies, information and telecommunication technologies, nanotechnologies, micro electro

mechanical systems (MEMS), sensor technologies, tissue engineering, and the neurosciences also provide a wealth of opportunities for individuals with disabilities and should be incorporated into research focused on disability and rehabilitation. In recognition of this need, the President's "New Freedom Initiative" has identified the RERC program as one worthy of expansion and the Administration has significantly increased the RERC budget for fiscal year 2002 (New Freedom Initiative, 2001).

NIDRR intends to fund up to five new RERCs in fiscal year 2002. Applicants must select from the following priority topic areas: (a) Spinal Cord Injury; (b) Recreational Technologies and Exercise Physiology Benefiting Persons with Disabilities; (c) Applied Biomaterials; (d) Measurement and Monitoring of Functional Performance; (e) Accessible Medical Instrumentation; (f) Universal Interface Technologies; (g) Work Place Accommodations; (h) Accessible Airline Transportation; and (i) Rehabilitation Robotics and Telem Manipulation Systems. Applicants are allowed to submit more than one proposal as long as each proposal addresses only one RERC topic area.

Priorities

We intend to fund up to five RERCs that will focus on innovative technological solutions, new knowledge, and concepts to promote the health, safety, independence, active engagement in daily activities, and quality of life of persons with disabilities. Each RERC must:

- (1) Contribute substantially to the technical and scientific knowledge-base relevant to its respective subject area;
- (2) Research, develop, and evaluate innovative technologies, products, environments, performance guidelines, and monitoring and assessment tools as applicable to its respective subject area;
- (3) Identify, implement, and evaluate, in collaboration with the industry, professional associations, and institutions of higher education, innovative approaches to expand research capacity in its respective field of study;
- (4) Monitor trends and evolving product concepts that represent and signify future directions for technologies in its respective area of research;
- (5) Provide technical assistance to public and private organizations responsible for developing policies, guidelines, and standards that affect its respective area of research.

In addition to the activities proposed by the applicant to carry out these purposes, each RERC must:

- Develop and implement in the first year of the grant, in consultation with the NIDRR-funded National Center for the Dissemination of Disability Research (NCDDR), a plan to disseminate the RERC's research results to disability organizations, persons with disabilities, technology service providers, businesses, manufacturers, and appropriate journals;

- Develop and implement in the first year of the grant, in consultation with the NIDRR-funded RERC on Technology Transfer, a plan for ensuring that all new and improved technologies developed by the RERC are successfully transferred to the marketplace;

- Conduct a state-of-the-science conference on its respective area of research in the third year of the grant cycle and publish a comprehensive report on the final outcomes of the conference in the fourth year of the grant cycle; and

- Coordinate on research projects of mutual interest with relevant NIDRR-funded projects as identified through consultation with the NIDRR project officer.

Each RERC must focus on one of the following priority topic areas:

(a) *Spinal Cord Injury*: This center must conduct research and develop applications that address problems in the treatment, rehabilitation, employment, and reintegration into society of persons with spinal cord injury. This center will be expected to work collaboratively with the NIDRR-funded Model Spinal Cord Injury Centers program;

(b) *Recreational Technologies and Exercise Physiology Benefiting Persons With Disabilities*: This center must research and develop technologies that will enhance recreational opportunities for people with disabilities and develop methods to enhance the physical performance and endurance of people with disabilities;

(c) *Applied Biomaterials*: This center must facilitate the application of advances in materials and tissue engineering for medical rehabilitation applications such as prosthetics and orthotics, implants, reconstructive surgery, and burns. It will bring together leaders in biomedical research, medical practitioners, and consumers to promote the design, development, and utilization of state-of-the-art methodologies and products for rehabilitation and disability applications;

(d) *Measurement and Monitoring of Functional Performance*: This center must research and develop technologies and methods that effectively assess the outcomes of rehabilitation therapies by combining measurements of

physiological performance with measures of functional performance;

(e) *Accessible Medical Instrumentation*: This center must research, develop, and evaluate methods and technologies to increase the usability and accessibility of diagnostic, therapeutic, and procedural healthcare equipment (i.e., equipment used during medical examinations, treatment, etc.) for people with disabilities. This includes developing methods and technologies that are useable and accessible for patients and health care providers with disabilities;

(f) *Universal Interface Technologies*: This center must research, develop, and evaluate universal interface technologies that will allow for easy integration of multiple technologies used by individuals with disabilities (e.g., augmentative communication devices, powered mobility devices, environmental control systems, telecommunication systems, and information technologies, including multimedia systems). This includes effective speech to text systems, eye and head control systems, and methods to enhance the utility of graphical devices for the visually impaired;

(g) *Work Place Accommodations*: This center must research, develop, and evaluate devices and systems to enhance the productivity of people with disabilities in the workplace. It must emphasize the application of universal design concepts to improve the utility of workplace tools and devices for all workers;

(h) *Accessible Airline Transportation*: This center must research and develop methods, systems, and devices that will promote and enhance the ability of people with disabilities to safely and efficiently embark/disembark, travel comfortably, and use restroom facilities on commercial passenger airliners; and

(i) *Rehabilitation Robotics and Telem Manipulation Systems*: This center must explore the use of human-scale robots and telem Manipulation (the integration of human-control with a manipulator) systems that will address the unique needs of people with disabilities and rehabilitation.

Intergovernmental Review

This program is not subject to Executive Order 12372 and the regulations in 34 CFR part 79.

Applicable Program Regulations: 34 CFR part 350.

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Note: The official version of this document is published in the **Federal Register**. Free Internet access to the official edition of the **Federal Register** and the Code of Federal Regulations is available on GPO Access at: <http://www.access.gpo.gov/nara/index.html> (Catalog of Federal Domestic Assistance Number: 84.133E, Rehabilitation Engineering Research Center Program.)

Program Authority: 29 U.S.C. 762(g) and 764(b)(3).

Dated: June 13, 2002.

Robert H. Pasternack,
Assistant Secretary for Special Education and Rehabilitative Services.

Appendix

Analysis of Comments and Changes

Rehabilitation Engineering Research Centers General Comments

Comment: The language used in the section titled "Description of Rehabilitation Engineering Research Centers" describes activities that could be carried out by a team lacking significant engineering input (e.g., by social scientists working with consumers and practitioners). While such research is valuable, the explicit involvement of engineers is what delineates the RERC program from other NIDRR (and National Institutes on Health) funded programs.

Discussion: Language used in the **Federal Register** to describe the RERC program is from regulatory language published in the Code of Federal Regulations (34 CFR Part 350.32). While NIDRR agrees that engineers must be an integral part of all RERCs, it is also important for each center to involve requisite skills and knowledge from other relevant professionals and consumers.

Changes: None.

Comment: Two commenters believe that the sentence "NIDRR is particularly interested in applications that address topic areas (a) and (b)" is awkward and out of context with the spirit of the rest of the proposed priority. It is felt that the sentence should either be removed altogether or separate (a) and (b) from this priority and have multiple announcements.

Discussion: NIDRR agrees that the language is awkward and out of context with the spirit and open nature of this competition.

Changes: The phrase "NIDRR is particularly interested in applications that address topic areas (a) and (b)" has been deleted.

Comment: Both the Rehabilitation Robotics and Telem Manipulation Systems and the Spinal Cord Injury priority topic areas should be funded or perhaps combined if funds are not available to fund both centers.

Discussion: NIDRR believes that all nine priority topic areas are important and are worthy of funding. NIDRR also believes there is a critical mass of work that needs to be done within each priority topic area and that combining topic areas as suggested by the commenter would only result in fewer resources for each topic area thereby affecting the ability to carry out the necessary research and development activities.

Changes: None.

Comment: One of the most profound impairments resulting from physical, sensory or cognitive disability is the dramatically reduced access to formal and continuing education experienced by these individuals. NIDRR should include a new priority topic area that addresses this need or, at least, include a requirement that all RERCs address this need.

Discussion: NIDRR agrees that education is important for all people, including those with disabilities. However, creating a center or requiring all centers to address educational issues is beyond the scope of the RERC program. There are other programs within the Department of Education (i.e., Office of Special Education Programs and Rehabilitation Services Administration) whose mission is to ensure that no child is left behind with regards to receiving an appropriate and accessible education as well as preparation for employment.

Changes: None.

Comment: While NIDRR's proposed priorities are stated with admirable clarity, their very clarity restricts the range of constructive responses. Therefore, it is recommended that NIDRR support RERC proposals that present innovative combinations and/or permutations of these priority topic areas.

Discussion: NIDRR believes there is a critical mass of work that needs to be done within each priority topic area and that combining topic areas and/or permutations of these topic areas would only result in fewer resources for each topic area thereby affecting the ability to carry out the necessary research and development activities.

Changes: None.

Comment: One commenter believes that all priority topic areas should be required to focus on multicultural and linguistic diversity of individuals with disabilities.

Discussion: All applicants are required to address the needs of individuals with disabilities from minority backgrounds pursuant to the regulatory language published in the Code of Federal Regulations (34 CFR Part 350.40). In addition to this requirement, an applicant could propose activities that focus on the linguistic diversity of individuals with disabilities and the peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to focus on the linguistic diversity of individuals with disabilities.

Changes: None.

Spinal Cord Injury Topic (SCI) Area

Comment: Given that communication disabilities are a possible result of SCI, the RERC on SCI should be required to include activities that look at respiratory, voice, and

communication disabilities resulting from SCI.

Discussion: An applicant could propose activities that focus on communication disabilities resulting from spinal cord injuries disabilities and the peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to focus on communication disabilities resulting from SCI.

Changes: None.

Comment: One commenter believes that the RERC on SCI should be required to focus some of its research and development activities on the unique challenges facing individuals with spinal cord injuries who reside in rural communities and states.

Discussion: An applicant could propose activities that focus on the unique challenges facing individuals with spinal cord injuries who reside in rural communities and states. The peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to focus on the unique challenges facing individuals with spinal cord injuries who reside in rural communities and states.

Change: None.

Recreational Technologies and Exercise Physiology Benefiting Persons With Disabilities Topic Area

Comment: One commenter recommended separating exercise physiology from the Recreational Technologies and Exercise Physiology Benefiting Persons with Disabilities priority topic area and creating a new RERC priority topic area that focuses solely on exercise physiology. The rationale provided to support this recommendation was that exercise physiology is a very broad field and includes metabolic assessment of exercise interventions on multiple organ systems.

Discussion: NIDRR believes that combining recreational technologies and exercise physiology provides opportunities for collaboration and resource sharing and is strategically a sound approach.

Changes: None.

Comment: One commenter asked if it is possible to submit a proposal for the RERC on Recreational Technologies and Exercise Physiology Benefiting Persons with Disabilities if the principal investigator is not a rehabilitation engineer. While the need for rehabilitation engineering is important, the most important issue is getting people with disabilities to start doing some form of exercise and determining successful adherence strategies.

Discussion: NIDRR has no requirement that RERC principal investigators must be rehabilitation engineers. However, NIDRR believes that engineers should play an integral role in all RERCs. An applicant may submit a proposal without demonstrating engineering expertise and the peer review process will evaluate the merits of the proposal.

Changes: None.

Comment: The RERC on Recreational Technologies and Exercise Physiology Benefiting Persons with Disabilities should

be required to address the rehabilitation needs of heart and pulmonary recovery/chronic populations (e.g., rehabilitation following heart attack).

Discussion: An applicant could propose activities that focus on the rehabilitation needs of individuals with heart and pulmonary complications disabilities and the peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to focus on the rehabilitation needs of individuals with heart and pulmonary complications.

Changes: None.

Applied Biomaterials Topic Area

Comment: The study of implant biomaterials is historically removed from rehabilitation and involve different scientific and industrial cultures. It might be of value to require this RERC to marry these cultures by requiring them to target the relationship between the rehabilitation recovery process and implants. Alternatively, "implant" could be taken out as an example so that more prominence is given to innovative orthotics and technologies to assist burn victims.

Discussion: An applicant could propose to study the relationship between the rehabilitation recovery process and implants. The peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to study the relationship between the rehabilitation recovery process and implants. Furthermore, NIDRR believes that including "implant" as one of four examples of medical rehabilitation applications increases research potential.

Changes: None.

Measurement and Monitoring of Functional Performance Topic Area

Comment: One commenter suggested that the RERC on Measurement and Monitoring of Functional Performance should be required to translate findings from technical engineering terminology into clinical phrasing for ease of application to patient care and to study at least two dissimilar pathologies to facilitate the development of a clinical perspective that can be more broadly applied.

Discussion: All RERCs are required to disseminate research findings to diverse audiences and in doing so they must translate their finding into appropriate and comprehensible language. An applicant may propose to study two dissimilar pathologies to facilitate the development of a clinical perspective that can be more broadly applied. The peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to study at least two dissimilar pathologies to facilitate the development of a clinical perspective that can be more broadly applied.

Changes: None.

Comment: The priority topic area on Measurement and Monitoring of Functional Performance appears to address only "technologies and methods that effectively assess the outcomes of rehabilitation therapies." This topic could be broadened to

allow the development of new technologies and methods for rehabilitation therapy. This would encourage a RERC to contribute new techniques in addition to only assessing existing or emerging techniques.

Discussion: The Measurement and Monitoring of Functional Performance priority topic area does not preclude an applicant from proposing to develop new technologies and methods for rehabilitation therapy provided the new technologies and methods can be used to measure and monitor functional performance. The peer review process will evaluate the merits of the proposal.

Changes: None.

Accessible Medical Instrumentation Topic Area

Comment: One commenter believes that the Accessible Medical Instrumentation priority is excessively limiting compared to the others and feels that it should be incorporated into the Work Place Accommodations topic area and the existing RERC on Telerehabilitation.

Discussion: NIDRR disagrees with the commenter that the Accessible Medical Instrumentation priority topic area is excessively limiting. Accessible diagnostic, therapeutic, and procedural healthcare equipment for people with disabilities, whether as patients or as healthcare providers, is important and warrants a research center that will focus on technological solutions to the problem.

Changes: None.

Universal Interface Technologies Topic Area

Comment: One commenter believes that the RERC on Universal Interface Technologies should be required to address the needs of individuals with severe communication disabilities—especially those who use augmentative communication devices.

Discussion: The Universal Interface Technologies priority topic area description identifies augmentative communication devices as one example of multiple technologies used by individuals with disabilities that this RERC can consider when researching and developing universal interface technologies. NIDRR also funds an RERC on Communication Enhancement whose primary responsibility is to focus on research activities benefiting the needs of individuals with severe communications impairments. An applicant could propose to study the relation between the rehabilitation recovery process and implants. The peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to study the relation between the rehabilitation recovery process and implants.

Changes: None.

Comment: One commenter feels that a distinction should be made between technologies that are command oriented (i.e., communication devices, environmental control systems) and those that are control oriented (i.e., mobility devices). While it is important that researchers consider an interface where both types of technologies are easily accessible, the RERC on Universal

Interface Technologies should focus activities on ensuring the seamless integration for command-oriented technologies affecting communication.

Discussion: NIDRR agrees with the commenter that the distinction between command and control oriented technologies prior to developing universal interface technologies is important. An applicant may propose activities that ensure a seamless integration for command-oriented technologies affecting communication. The peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to focus on activities to ensure a seamless integration for command-oriented technologies affecting communication.

Changes: None.

Comment: The RERC on Universal Interface Technologies should focus some of its research on appropriate interface choices for individuals with specific disabilities. This research could involve the development of novel access methods and evaluation tools for determining appropriate interface choices for individuals.

Discussion: An applicant could propose research on interface choices that are appropriate for specific individuals with disabilities. The peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to study the relation between the rehabilitation recovery process and implants research on interface choices that are appropriate for specific individuals with disabilities.

Changes: None.

Work Place Accommodations Topic Area

Comment: The accumulating body of knowledge in job accommodation case experience provides excellent guidance to employers, vocational rehabilitation professionals, and people with disabilities in resolving new issues. This body of knowledge also has the potential for exposing areas of need for accommodation technologies yet to be developed, as well as innovative applications of existing technologies and areas where universal design in workplace tools, products, and systems can reduce the level of accommodation needed. The Work Place Accommodations priority topic area should be expanded to include a requirement that the RERC support existing job accommodation efforts and programs.

Discussion: NIDRR agrees with the commenter that there already exists a critical mass of knowledge and expertise in the area of job accommodation and expects all applicants to familiarize themselves with the most current literature and to use that body of knowledge as a foundation for their research and development activities. The peer review process will evaluate the merits of the proposal.

Changes: None.

Comment: The RERC on Work Place Accommodations should be required to develop technologies that will benefit all persons with disabilities, including those with mental illness, in all vocational environments, including sheltered or affirmative settings.

Discussion: An applicant could propose activities to develop technologies that will benefit all persons with disabilities, including those with mental illness, in all vocational environments, including sheltered and affirmative settings, and the peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to focus on the development of technologies that will benefit all persons with disabilities, including those with mental illness, in all vocational environments, including sheltered and affirmative settings.

Changes: None.

Comment: The RERC on Work Place Accommodations should be required to develop new and innovative strategies in partnership with special education programs to insure that young persons with disabilities are qualified, trained, and certified to become productive employees in all fields of vocational endeavor.

Discussion: An applicant could propose activities to develop new and innovative strategies in partnership with special education programs. The peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to focus on the development of new and innovative strategies in partnership with special education programs.

Changes: None.

Comment: The RERC on Work Place Accommodations should be required to develop paraprofessional training programs to train work place accommodation specialists who are working in American business and industry, including employees with disabilities.

Discussion: An applicant could propose activities to develop paraprofessional training programs to train work place accommodation specialists who are working in American business and industry, including employees with disabilities. The peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to focus on the development of paraprofessional training programs to train work place accommodation specialists who are working in American business and industry, including employees with disabilities.

Changes: None.

Comment: The concept of universal design is reasonably well accepted in white-collar work environments. However, this is not the case for blue-collar work environments. The RERC on Work Place Accommodations, in conjunction with the RERC on Ergonomic Solutions for Employment, should be required to pursue the concept of universal design in blue-collar work environments such as the machine tool industry, the robotics industry, and the hand tool industry.

Discussion: NIDRR agrees with the commenter and points out that the RERC is required to emphasize the application of universal design concepts to improve the utility of workplace tools and devices for all workers, including those in diverse work environments.

Changes: None.

Comment: The ADA has not been successful at getting people with disabilities employed largely due to the fact that business and industry are not convinced that persons with disabilities can positively impact their "bottom line." Therefore, the RERC on Work Place Accommodations must develop quantitative outcome measures that generate longitudinal data that correlate accommodation technologies and strategies with personal productivity.

Discussion: An applicant can propose to develop quantitative outcome measures that generate longitudinal data that correlate accommodation technologies and strategies with personal productivity under Activities 1 and 2. The peer review process will evaluate the merits of this proposal. However, NIDRR has no basis to determine that all applicants should be required to develop quantitative outcome measures that generate longitudinal data that correlate accommodation technologies and strategies with personal productivity.

Changes: None.

Comment: One commenter believes that the RERC on Work Place Accommodations should be required to include individuals with communication disabilities among those individuals with disabilities whose productivity must be enhanced.

Discussion: An applicant can propose to include individuals with communication disabilities among those with disabilities whose productivity must be enhanced and the peer review process will determine the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to include individuals with communication disabilities among those individuals with disabilities whose productivity must be enhanced.

Changes: None.

Comment: The role of the RERC on Work Place Accommodations should be clarified in relationship to the existing RERC on Ergonomic Solutions for the Work Place.

Discussion: The RERC on Ergonomic Solutions for the Work Place is an NIDRR-funded program in its fourth year of a five-year funding cycle. The proposed RERC on Work Place Accommodations is one of nine priority topic areas that applicants may choose from to submit a proposal. If an application in the area of Work Place Accommodations is funded, the relationship between that center and the one on Ergonomic Solutions for the Work Place is expected to be both collaborative and mutually supportive. Each RERC must coordinate on research projects of mutual interest with relevant NIDRR-funded projects as identified through consultation with the NIDRR project officer.

Changes: None.

Accessible Airline Transportation Topic Area

Comment: One commenter pointed out the need for training of airline personnel on how to interact with individuals who use augmentative communications systems (e.g., AAC devices, electrolarynx, sign language) and believes the RERC on Accessible Airline Transportation should be required to address these issues.

Discussion: An applicant can propose training for airline personnel on how to

interact with individuals with disabilities who use augmentative communication systems under Activity 5. The peer review process will evaluate the merits of this proposal. However, NIDRR has no basis to determine that all applicants should be required to train airline personnel on how to interact with individuals who use augmentative communication systems.

Changes: None.

Rehabilitation Robotics and Telem Manipulation Systems Topic Area

Comment: The RERC on Rehabilitation Robotics and Telem Manipulation Systems should be required to investigate robot-aided rehabilitation devices and techniques.

Discussion: An applicant could propose to investigate robot-aided rehabilitation devices and techniques. The peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to investigate robot-aided rehabilitation devices and techniques.

Changes: None.

Comment: The RERC on Rehabilitation Robotics and Telem Manipulation Systems should be required to investigate intelligent mobility aids, a term used to include a wide range of devices that make use of technology (e.g., sensors, obstacle avoidance algorithms) originally developed for mobile robots to provide independent mobility to individuals with motor or perceptual impairments.

Discussion: An applicant could propose to investigate intelligent mobility aids and the peer review process will evaluate the merits of the proposal. However, NIDRR has no basis to determine that all applicants should be required to investigate intelligent mobility aids.

Changes: None.

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DEPARTMENT OF EDUCATION

Office of Special Education and Rehabilitative Services

[CFDA No.: 84.133E-7]

National Institute on Disability and Rehabilitation Research— Rehabilitation Engineering Research Centers (RERC) Program; Notice Inviting Applications for Fiscal Year 2002

Note to Applicants: This notice contains the information, application forms, and instructions you need to apply for a grant under the program.

Purpose of the Program: The purpose of the RERC Program is to improve the effectiveness of services authorized under the Rehabilitation Act of 1973 (the Act), as amended.

For FY 2002 the competition for new awards focuses on projects designed to meet the priorities we describe in the

PRIORITIES section of this application notice. The priorities are intended to improve rehabilitation services and outcomes for individuals with disabilities.

Eligible Applicants: Parties eligible to apply for grants under this program are States; public or private agencies, including for-profit agencies; public or private organizations, including for-profit organizations; institutions of higher education; and Indian tribes and tribal organizations.

Application Available: June 19, 2002.

Letters of Intent

Due to the open nature of this competition, NIDRR is requiring all potential applicants to submit a Letter of Intent (LOI). Each LOI must be limited to a maximum of four pages and must include the following information: (1) The title of the proposed RERC, the name of the host institution, the name of the Principal Investigator (PI), and the names of partner institutions and entities; (2) a brief statement of the vision, goals, and objectives of the proposed RERC and a description of its research and development activities at a sufficient level of detail to allow NIDRR to select potential reviewers; (3) a list of proposed RERC staff including the Center Director and key personnel; and (4) a list of individuals whose selection as a reviewer might constitute a conflict of interest due to involvement in proposal development, selection as an advisory board member, co-PI relationships, etc.

The signed, original LOI must be received by NIDRR no later than July 19, 2002. Submission of an LOI is a prerequisite for eligibility to submit an application. With prior approval, an e-mail or facsimile copy of an LOI will be accepted, but the signed original must be sent to: William Peterson, U.S. Department of Education, 400 Maryland Avenue, SW., room 3425, Switzer Building, Washington, DC 20202-2645. For further information regarding the LOI requirement, contact William Peterson at (202) 205-9192 or by e-mail at: william.peterson@ed.gov.

Deadline for Transmittal of Applications: August 19, 2002.

Maximum Award Amount: \$900,000.

Note: We will reject any application that proposes a budget exceeding the stated maximum award amount in any year (See 34 CFR 75.104(b)).

Estimated Number of Awards: 5.

Project Period: 60 months.

Note: The Department is not bound by any estimates in this notice.

Program Authority: 29 U.S.C. 762.

Applicable Regulations: (a) The Education Department General Administrative Regulations (EDGAR), 34 CFR Parts 74, 75, 77, 80, 81, 82, 85, 86, and 97, and (b) The program regulations 34 CFR part 350.

Priorities

This competition focuses on projects designed to meet the priorities in the notice of final priorities for these programs, published elsewhere in this issue of the **Federal Register**. The priorities are: (a) Spinal Cord Injury; (b) Recreational Technologies and Exercise Physiology Benefiting Persons with Disabilities; (c) Applied Biomaterials; (d) Measurement and Monitoring of Functional Performance; (e) Accessible Medical Instrumentation; (f) Universal Interface Technologies; (g) Work Place Accommodations; (h) Accessible Airline Transportation; and (i) Rehabilitation Robotics and Telem Manipulation Systems.

For FY 2002, these priorities are absolute priorities. Under 34 CFR 75.105(c)(3), we consider only applications that meet one or more of these priorities.

Selection Criteria

We use the following selection criteria to evaluate applications under this program.

The maximum score for all of these criteria is 100 points.

The maximum score for each criterion is indicated in parentheses.

An additional 10 points may be earned by an applicant depending on how well they meet the additional selection criterion elsewhere in this notice.

(a) *Importance of the problem* (6 points total).

(1) The Secretary considers the importance of the problem.

(2) In determining the importance of the problem, the Secretary considers the following factors:

(i) The extent to which the applicant clearly describes the need and target population (3 points).

(ii) The extent to which the proposed project will have beneficial impact on the target population (3 points).

(b) *Responsiveness to an absolute or competitive priority* (4 points total).

(1) The Secretary considers the responsiveness of an application to the absolute or competitive priority published in the **Federal Register**.

(2) In determining the application's responsiveness to the absolute or competitive priority, the Secretary considers the extent to which the applicant addresses all requirements of the absolute or competitive priority (4 points).