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Part 1

MINORITY SERVING INSTITUTION DIGITAL AND WIRELESS TECHNOLOGY OPPORTUNITY ACT OF 2005

JULY 28, 2005.—Ordered to be printed

Mr. BOEHLERT, from the Committee on Science, submitted the following

R E P O R T

[To accompany H.R. 921]

[Including cost estimate of the Congressional Budget Office]

The Committee on Science, to whom was referred the bill (H.R. 921) to establish a digital and wireless network technology program, and for other purposes, having considered the same, report favorably thereon without amendment and recommend that the bill do pass.

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39–006

I. Purpose of the Bill

The purpose of the bill is to assist minority-serving institutions in acquiring, and augmenting their use of, digital and wireless networking technologies to improve the quality and delivery of educational services at their institutions.

II. Background and Need for the Legislation

Developing an educated and technologically literate workforce is an important part of our efforts to maintain our Nation's preeminence in an increasingly competitive, information-based, global economy. Whether technology should be used in schools is no longer the issue. Rather the current emphasis is on ensuring that technology is available and used effectively to create new opportunities in school and at work. Already, more than half of all workers—from office workers to auto mechanics—use a computer on the job, and that number is expected to grow in the near future. If we are to tap the full potential of this country and its people, we must ensure that all Americans are technically proficient and prepared for the 21st Century workforce.

Unfortunately, too many Americans—and minorities in particular—have been raised in an environment without a computer in the home, attended poor schools that were neither wired nor equipped with 21st century technology, and have been taught by educators who may not have had previous experience with computers. Despite a significant federal investment in education technology at the elementary and secondary school levels, a large number of low-income, minority students still have their first exposure to computers and the Internet when they arrive on the college campus.

The U.S. Department of Commerce first documented the disparity between information "haves" and information "have-nots"—the so-called "digital divide"—in 1995. More recently, the Department issued a July 2000 report, entitled Falling Through the Net: Toward Digital Inclusion, which found that African-Americans, Hispanics, and other traditional "have-not" groups were experiencing an access disparity that persisted and, in some cases, widened in recent years. Whites were more likely to have access to the Internet from home than African-Americans or Hispanics from any location, with African-American and Hispanic households approximately one-third as likely as a household of Asian/Pacific Islander descent to have Internet access and roughly two-fifths as likely as white households. The 2000 report also found that the gap appeared to be growing wider, with the digital divide increasing slightly for African-Americans and Hispanics from their December 1998 rates.

The digital divide series prompted the National Association for Equal Opportunity in Higher Education (NAFEO), a non-profit public policy and advocacy group, to assess the computing resources, networking and connectivity of its member universities. Of NAFEO's 118 member institutions, 80 Historically Black Colleges and Universities (HBCUs) provided input into the study, known as the HBCU Technology Assessment Study. Funded by the U.S. Department of Commerce, the study found that 88 percent of HBCUs had access to T–1 lines—approximately 1.5 million bits per second

(Mb/s)—the minimum standard for connectivity and generally considered insufficient to support capabilities beyond Internet and World Wide Web connectivity for an institution of any size. Larger bandwidth, for faster connections and more web-based applications, was available to half of reporting institutions.

The larger problem turned out not to be the availability of networking capacity, but rather its use. Only 7.5 percent reported using the high-speed lines even though they were available at half the institutions. Similarly, of the 29 percent of HBCUs with access to wireless technology, only 43 percent were using it. Although it was not clear why many HBCUs weren't using the high-speed connections available to them, some speculated that it had to do with finances, lack of strategic planning, faculty motivation, and training. The study also found that none of the participating HBCUs required undergraduate students to own computers and only 15 percent recommended student computer ownership. As a result, the vast majority of HBCU students relied on institutional resources to connect to the Internet, World Wide Web or other networks, yet only 50 percent of the respondents reported providing "on-demand" student access to computing resources.

Although the report did not examine the need for an improved technology infrastructure at other minority-serving institutions (MSIs), anecdotal evidence suggests that the problems at other MSIs mirror those at the HBCUs.

MSIs play a unique role in the education of our diverse American workforce. According to recent reports, 21 percent of all college degrees and certificates awarded to African-American, American Indian and Hispanic students are conferred by MSIs. MSIs also help underrepresented students succeed in all disciplines, and science, mathematics, and engineering in particular. For example, of African-Americans earning bachelor's degrees in science, math, engineering or technology fields in 1996, 31 percent received them at HBCUs. Similarly, Hispanic-Serving Institutions produced 20 percent of all science, math, engineering or technology bachelor's degrees awarded to Hispanics in 1996.

MSIs have special expertise in serving their communities, which include large numbers of low-income or first-generation college students. Unlike other, larger institutions of higher education, however, MSIs typically have small or nonexistent endowments and few wealthy alumni. As a result, the ability to finance the acquisition and maintenance of the technology that will prepare these students for the workforce is especially challenging for many MSIs.

This Act seeks to address the concerns above and provides funding to assist minority-serving institutions in acquiring, and augmenting their use of, digital and wireless networking technologies to improve the quality and delivery of educational services at their institutions. In particular, the Act is focused on funding activities that will improve the technology skills of students, faculty and administrators and narrow the disparity in access to technology.

III. Hearing Summary

During the 108th Congress, the Subcommittee on Research of the Committee on Science held a hearing to examine the unmet technology infrastructure needs of minority-serving institutions (MSIs). Invited witnesses provided comments on and made recommenda-

tions for additions to H.R. 2183, the Minority Serving Institution Digital and Wireless Technology Opportunity Act of 2003. This legislation, introduced by Representative J. Randy Forbes, was the predecessor to H.R. 921 in the 109th Congress.

Specifically, on July 9, 2003, the Subcommittee received testimony from Senator George Allen, sponsor of S. 196, the Senate companion to H.R. 2183, and Representative Edolphus Towns, sponsor of H.R. 2272, similar bipartisan legislation introduced in the House of Representatives. The Subcommittee also heard testimony from representatives of MSIs and associations of such institutions, including the National Association for Equal Opportunity in Higher Education, the Hispanic Association of Colleges and Universities, and the United Negro College Fund. These witnesses discussed the technology infrastructure needs at MSIs as well as efforts by such institutions to address them. Finally, the Subcommittee heard from then National Science Foundation (NSF) Director, Dr. Rita Colwell. Dr. Colwell described her agency's efforts to expand access to women and minorities in science, mathematics, engineering and technology education and research and announced a new initiative to provide outreach to MSIs. She also expressed opposition to the bill's placement of the program at NSF.

IV. Committee Actions

After the hearing in the 108th Congress, Representatives J. Randy Forbes and Edolphus Towns reintroduced the modified text of H.R. 2183 as H.R. 2801, the Minority Serving Institution Digital and Wireless Technology Opportunity Act of 2003, a bill to build the technology infrastructure at MSIs.

On July 22, 2003, the Full Committee on Science met to consider H.R. 2801. A clarifying amendment, which provided that instruction in science, mathematics, engineering and technology subjects should be among those in which educators are able to receive training in the use of technology, was offered by Chairman Boehlert. The amendment was adopted by voice vote. An amendment was offered by Ms. Woolsey, on behalf of Ms. Johnson, to express the Sense of the Congress on the contributions of African American mathematicians, scientists and inventors. The amendment was adopted by voice vote. An amendment was offered by Mr. Honda to create a new category of minority institutions for Asian Americans. By unanimous consent, Mr. Honda withdrew the amendment. Mr. Hall moved that the Committee favorably report the bill, H.R. 2801, as amended, with the recommendation that the bill as amended do pass, that the staff be instructed to make technical and conforming changes to the bill as amended and prepare the legislative report, and that the Chairman take all necessary steps to bring the bill before the House for consideration. With a quorum present, the motion was agreed to by voice vote.

On November 14, 2004, the Committee on Science reported the bill, as amended, and filed the report (108–789). No further action was taken prior to the adjournment of the 108th Congress.

On February 17, 2005, Representatives J. Randy Forbes and Edolphus Towns reintroduced the Minority Serving Institution Digital and Wireless Technology Opportunity Act of 2005 as H.R. 921.

The full Committee on Science met on May 4, 2005 to consider H.R. 921. The bill was ordered reported, favorably, without amendment by unanimous consent.

V. Summary of Major Provisions of the Bill

• Establishes the Minority Serving Institution Digital and Wireless Technology Opportunity Program within the Technology Administration of the Department of Commerce to assist MSIs in acquiring and augmenting their use of networking and information technology. Funds may be used to acquire equipment; develop and provide training, education and professional development programs related to the use of technology; provide teacher education, including pre-service and in-service professional development, library and media specialist training and pre-school and teacher aid certification in technology; obtain technical assistance; and foster the use of technology to improve research and education.

• Establishes an Advisory Council, composed of representatives of MSIs, minority businesses and others with expertise in technology, to help encourage maximum participation among eligible institutions in the program.

• Establishes review panels, selected by the Under Secretary, with, among others, representatives of MSIs and others who are knowledgeable about MSIs and technology issues, to judge the quality and merit of the proposals, including the extent to which the institution can effectively use the funds. Requires the Under Secretary to consider the recommendations of a review panel in determining whether to award or deny funds.

• Requires matching funds of 25 percent or $500,000, whichever is less, for institutions with endowments of more than $50,000,000. Requires awards to be granted on a priority basis to those with a demonstrated need for assistance and, to the extent practicable, to all types of institutions eligible for assistance.

• Requires institutions to report annually to the Under Secretary on their use of the funds.

• Requires the Under Secretary to contract with the National Academy of Public Administration to conduct an independent assessment once every three years on the effectiveness of the program in improving the education and training as well as access to and familiarity with technology for students, faculty and staff. Also requires recommendations on the continuing need for federal support. Upon completion, requires the results of the independent assessment to be transmitted to the Congress.

• Authorizes $250 million for fiscal year 2006 and all subsequent years through fiscal year 2010.

VI. Section-by-Section Analysis (by Title and Section)

Section 1. Short title

The "Minority Serving Institution Digital and Wireless Technology Opportunity Act of 2005."

Section 2. Establishment of program

Establishes a Minority Serving Institution Digital and Wireless Technology Opportunity Program within the Technology Administration of the Department of Commerce to assist eligible institu-

tions in acquiring, and augmenting the use of, digital and wireless networking technologies to improve the quality and delivery of educational services at minority-serving institutions (MSIs).

Funds may be used to (1) acquire equipment, instrumentation, networking capability, hardware and software, digital network technology, wireless technology, and infrastructure; (2) develop and provide digital and wireless networking technology training, education and professional development; (3) acquire capacity-building technical assistance through remote technical support, workshops, and distance learning services; and (4) foster the use of digital and wireless networking technology to improve research and education.

Requires applicants to describe any technology to be acquired and how the applicant will ensure that the technology will be made available to students, faculty and administrators. Requires the Under Secretary, consistent with the recommendations of a review panel and in consultation with the advisory panel, to establish other application requirements.

Requires the establishment of an advisory council, which must include representatives of minority institutions, minority businesses and technology experts, to help the Under Secretary encourage maximum participation by eligible institutions and to provide advice on the procedures to review applications. Requires the establishment of review panels, which must include representatives of MSIs and others who are knowledgeable about MSIs and technology issues, to judge the quality and merit of proposals and the extent to which they can effectively and successfully utilize the funds. Requires the Under Secretary to take into consideration the recommendations of a review panel in awarding grants. Requires the Under Secretary to convene an annual meeting of MSIs receiving grants to foster collaboration and capacity building.

Requires a non-federal match equal to 25 percent of the grant or $500,000, whichever is less, for institutions with an endowment of more than $50,000,000. Limits institutions that receive grants that exceed $2,500,000 from receiving another grant during the authorization.

Allows MSIs to seek funds as part of a consortium, but requires grants to be awarded to the MSIs only. Allows grants for developing strategic plans. Requires a priority in funding for institutions with the greatest need for assistance and requires that awards are made to all types of eligible institutions.

Requires institutions to report annually to the Under Secretary on their use of the funds. Requires the Under Secretary to contract with the National Academy of Public Administration to conduct an independent assessment once every three years on the effectiveness of the program in improving education and training, as well as access to, and familiarity with technology for students, faculty and staff. Also requires recommendations on the continuing need for federal support. Upon completion, requires the results of the independent assessment to be transmitted to the Congress.

Defines terms.

Section 3. Authorization of appropriations

Authorizes $250 million for fiscal year 2006 and each year through fiscal year 2010.

VII. Committee Views

The Committee believes that our continued economic growth and competitiveness depends in large part on advances in science and technology and our ability to produce a technologically sophisticated workforce. Yet the Committee has concluded that, despite the growing federal investment in programs designed to strengthen MSIs, the disparity in access to, and use of, technology between MSIs and other institutions of higher education limits the ability of MSIs to graduate technically literate students and contribute positively to the fields of science, mathematics, engineering and technology.

The program authorized by this Act is designed not only to acquire technology but also to ensure that the new technology is used to improve education. In addition, this Act provides opportunities for MSIs to determine the best strategies to build and maintain their technology infrastructures through annual meetings with other grantees.

As the bill was initially conceived during the 108th Congress, the program was placed at the National Science Foundation (NSF). The Committee strongly opposed that placement because the mission of the agency does not include the acquisition of technology that is unrelated to scientific research. Moreover, the Committee was also concerned that the placement of the program at NSF would put other education and outreach programs at risk, including those designed to increase the participation of women and minorities in the sciences. The Committee believes placement of the program within the Technology Administration at the Department of Commerce, as reflected in H.R. 921 and its 108th Congress predecessor, H.R. 2801, as amended, is a better fit.

While the Committee believes that the Minority Serving Institution Digital and Wireless Technology Act of 2005 will help provide important seed money to address the technology needs of MSIs, the legislation itself is not a "silver bullet." The Committee recognizes that the effective use of technology in educational settings is expensive. It will take a coordinated effort-one that involves institutions, governments, and the private sector-to motivate and train more students to bridge the technology divide. To that end, the Committee urges MSIs to adopt and implement strategies that have been successful-such as working in collaboration with businesses and other institutions of higher education-to use its technology resources efficiently and maintain its infrastructure in an appropriate manner. For that reason, the Committee included the development of a long-term strategic plan for the acquisition and use of technology as an allowable use of funds under this program and urges MSIs to take advantage of this provision to ensure that limited resources are used effectively.

The Committee anticipates that many MSIs receiving grants under this program will use the funds to acquire instrumentation, enhance infrastructure and/or strengthen existing digital wireless networking technology at their institutions, but expects such funds to also be used to improve teaching and learning for students, faculty and administrators. In particular, the Committee emphasizes the special contribution that technology can make in strengthening

academic programs, including mathematics, science, engineering and technology and teacher preparation, at eligible institutions.

For the purposes of the application and review procedures, the Committee expects the Under Secretary to ensure that members of review panels include representatives of MSIs and others who are knowledgeable about the technology needs of the eligible institutions. The Committee believes that the review panels should include individuals who are conversant with the particular mission of MSIs. In so doing, the Committee hopes to encourage greater participation among MSIs and their representatives on the review panel and in the program, while guarding against conflicts of interest.

The Committee believes that the review panels serve an important role in providing advice to the Under Secretary about the quality and merit of an application submitted by MSIs. To ensure that the Under Secretary receives the best possible advice, it is the Committee's view that these panels should include a diverse range of experts knowledgeable about both the technology being sought and the implementation of this technology at education institutions. For that reason, the Committee expects the membership on these panels to include (in addition to representatives of minority-serving institutions) experts in information technology education and training, hardware, networking, both in academic and industrial settings; and Chief Information Officers from academic institutions and industry.

The Committee requires the Under Secretary to convene an annual meeting of grantees. It is the Committee's view that this should serve as an opportunity not just to foster collaboration and capacity building, as required by the program, but also to build relationships between the Department of Commerce and the MSI community.

With respect to the matching requirement, the Committee urges all applicants-including those with little or no endowment-to seek additional funds from non-federal sources, including business, to maximize the investment in technology and technology education at their institution. The Committee believes this is important to maintaining the technological edge of the recipient institutions and to keeping students and faculty current after the Federal contribution expires. Yet, the Committee appreciates the financial circumstances of many MSIs and, for that reason, waives the required match for those with an endowment equal to or less than $50 million.

In making awards, the Committee seeks to ensure that all eligible institutions are able to share in the federal funding. For that reason, the Committee limited the number of grant funds in excess of $2.5 million that any one institution could receive during the five-year authorization. It is not the Committee's intention to establish a maximum grant. Rather, the Committee seeks to ensure that the full range of MSIs—urban and rural, public and private, two-year and four-year—are able to compete effectively for grants under this program, with priority given to institutions with a demonstrated need for assistance.

Because there is not sufficient data on how best to help MSIs catch up to other institutions of higher education, the Committee believes that accurate reporting on the use of funds is an important

requirement of the program. Therefore, each grantee must annually report on its use of the grant, and the Under Secretary must contract with the National Academy of Public Administration to conduct an independent assessment of the program. The Committee expects these reports both to inform the efforts of MSIs and other institutions of higher education on how best to improve access to technology and to evaluate the effectiveness of the program in improving education and training at MSIs.

The Committee recognizes that other institutions of higher education with unmet technology needs also serve statistically significant numbers and percentages of minority and low-income students and appreciates the fact that the digital divide includes disparities in socioeconomic status and educational attainment. For that reason, the Committee was careful to include so called "majority-minority institutions," or institutions with large low-income minority populations that otherwise do not qualify as a HBCU, HSI, or Tribal Serving Institution among those institutions that are eligible for assistance under this program.

In addition, the Committee acknowledges that some Members are interested in establishing additional categories of minority populations, such as Asian Americans, for the purposes of this program. While recognizing that some minority groups, like Asian Americans, are an important part of our society, the Committee was disinclined to include them as a new category under this program because too little data was available on the number of low-income Asian American students at institutions of higher education and the types of institutions that may benefit from this new designation. To that end, the Committee directs the Under Secretary, in consultation with the Department of Education, to determine the number of institutions serving significant Asian American populations. The Committee stresses that race is but one factor in determining the eligibility of an institution under this Act and seeks to ensure that Federal funds are not inappropriately targeted to otherwise wealthy, digitally well-connected institutions.

VIII. Cost Estimate

A cost estimate and comparison prepared by the Director of the Congressional Budget Office under section 402 of the Congressional budget Act of 1974 has been timely submitted to the Committee on Science prior to the filing of this report and is included in Section X of this report pursuant to House rule XIII, clause 3(c)(3).

H.R. 921 does not contain new budget authority, credit authority, or changes in revenues or tax expenditures. Assuming that the sums authorized under the bill are appropriated, H.R. 921 does authorize additional discretionary spending, as described in the Congressional Budget Office report on the bill, which is contained in Section X of this report.

IX. Congressional Budget Office Cost Estimate

U.S. Congress,
Congressional Budget Office,
Washington, DC, May 11, 2005.

Hon. Sherwood L. Boehlert,
Chairman, Committee on Science,
House of Representatives, Washington, DC.

Dear Mr. Chairman: The Congressional Budget Office has prepared the enclosed cost estimate for H.R. 921, the Minority Serving Institution Digital and Wireless Technology Opportunity Act of 2005.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is Mike Waters.

Sincerely,

Elizabeth M. Robinson
(For Douglas Holtz-Eakin, Director).

Enclosure.

H.R. 921—Minority Serving Institution Digital and Wireless Technology Opportunity Act of 2005

Summary: H.R. 921 would create a new grant program within the Technology Administration of the Department of Commerce for educational institutions that serve minority students. Eligible institutions could use the funds to improve instructional capabilities and infrastructure related to digital and wireless technologies. The bill would authorize the appropriation of $250 million for each of fiscal years 2006 through 2010 for this program and would require grant recipients to provide matching funds under certain conditions. The Under Secretary of Commerce for Technology would administer the new Minority Serving Institution Digital and Wireless Technology Opportunity Program with guidance from a special advisory council.

Assuming appropriation of the authorized amounts, CBO estimates that implementing H.R. 921 would cost $823 million over the 2006–2010 period. CBO estimates that enacting this bill would have no effect on direct spending or revenues.

H.R. 921 contains no intergovernmental or private-sector mandates as defined by the Unfunded Mandates Reform Act (UMRA); any costs to state, local, or tribal governments would result from complying with the conditions of federal assistance.

Estimated cost to the Federal Government: The estimated budgetary impact of H.R. 921 is shown in the following table. For this estimate, CBO assumes that the amounts authorized will be appropriate near the start of each fiscal year and that outlays will occur at rates similar to other educational grant programs. The costs of this legislation fall within budget function 370 (commerce and housing credit).

	By fiscal year, in millions of dollars—				
	2006	2007	2008	2009	2010
CHANGES IN SPENDING SUBJECT TO APPROPRIATION					
Authorization Level	250	250	250	250	250
Estimated Outlays	30	130	200	228	235

Intergovernmental and private-sector impact: H.R. 921 contains no intergovernmental or private-sector mandates as defined by UMRA. The bill would benefit eligible institutions of higher education by authorizing $250 million per year, for fiscal years 2006 through 2010, to strengthen their capacity to provide instruction in digital and wireless networking technologies. Public institutions could apply for and receive these grants; any costs they incur would result from complying with conditions of federal assistance.

Previous CBO estimate: On April 27, 2005, CBO transmitted a cost estimate for S. 432, an identically titled bill, as ordered reported by the Senate Committee on Commerce, Science, and Transportation on April 14, 2005. The two versions of the legislation are similar and would authorize the same amount of appropriations. H.R. 921 would place the implementation of the program within the Department of Commerce while the Senate bill would establish an entirely new office within the National Science Foundation.

Estimate prepared by: Federal Costs: Michael Waters. Impact on State, Local, and Tribal Governments: Lisa Ramirez-Branum. Impact on the Private Sector: Craig Cammarata.

Estimate approved by: Peter H. Fontaine, Deputy Assistant Director for Budget Analysis.

X. Compliance With Public Law 104–4

H.R. 921 contains no unfunded mandates.

XI. Committee Oversight Findings and Recommendations

The Committee on Science's oversight findings and recommendations are reflected in the body of this report.

XII. Statement on General Performance Goals and Objectives

Pursuant to clause (3)(c) of House rule XIII, the goals of H.R. 921 are to assist minority serving institutions in acquiring, and augmenting their use of, digital and wireless networking technologies to improve the quality and delivery of educational services at their institutions.

The Committee requires that all of the programs authorized under the Minority Serving Institution Digital and Wireless Networking Opportunity Act of 2005 be awarded on a competitive basis. Informed by the recommendations of a review panel, this process is expected to ensure that funds are awarded to build the technology infrastructure at the full range of minority serving institutions, with a priority for demonstrated need for assistance. While improving the technology infrastructure is a key component of this legislation, it is imperative that this technology be used to improve the teaching and learning of students, faculty and administrators. In fact, all efforts to acquire this technology should be supported with parallel efforts to use such technology to improve the quality and delivery of educational services at the minority serving institutions.

Given the limited amount of data on the specific technology needs of many minority serving institutions—and the significant investment authorized by this program—the bill requires all minority serving institutions receiving assistance under this program to

be subjected to a rigorous assessment and evaluation of how the money is spent in order to collect and disseminate information on best practices.

XIII. Constitutional Authority Statement

Article I, section 8 of the Constitution of the United States grants Congress the authority to enact H.R. 921.

XIV. Federal Advisory Committee Statement

The functions of the advisory committee established by H.R. 921 are not currently being nor could they be performed by one or more agencies or by enlarging the mandate of another existing advisory committee.

XV. Congressional Accountability Act

The Committee finds that H.R. 921 does not relate to the terms and conditions of employment or access to public services or accommodations within the meaning of section 102(b)(3) of the Congressional Accountability Act (Public Law 104–1).

XVI. Statement on Preemption of State, Local, or Tribal Law

This bill is not intended to preempt any state, local, or tribal law.

XVII. Changes in Existing Law Made by the Bill, as Reported

In compliance with clause 3(e) of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (new matter is printed in italic and existing law in which no change is proposed is shown in roman):

SECTION 5 OF THE STEVENSON-WYDLER TECHNOLOGY INNOVATION ACT OF 1980

SEC. 5. COMMERCE AND TECHNOLOGICAL INNOVATION.

(a) * * *

* * * * * * *

(g) Minority Serving Institution Digital and Wireless Technology Opportunity Program.—

(1) In general.—The Secretary, acting through the Under Secretary, shall establish a Minority Serving Institution Digital and Wireless Technology Opportunity Program to assist eligible institutions in acquiring, and augmenting their use of, digital and wireless networking technologies to improve the quality and delivery of educational services at eligible institutions.

(2) Authorized activities.—An eligible institution may use a grant, cooperative agreement, or contract awarded under this subsection—

(A) to acquire equipment, instrumentation, networking capability, hardware and software, digital network technology, wireless technology, and infrastructure to further the objective of the Program described in paragraph (1);

(B) to develop and provide training, education, and professional development programs, including faculty develop-

ment, to increase the use of, and usefulness of, digital and wireless networking technology;

(C) to provide teacher education, including the provision of preservice teacher training and in-service professional development at eligible institutions, library and media specialist training, and preschool and teacher aid certification to individuals who seek to acquire or enhance technology skills in order to use digital and wireless networking technology in the classroom or instructional process, including instruction in science, mathematics, engineering, and technology subjects;

(D) to obtain capacity-building technical assistance, including through remote technical support, technical assistance workshops, and distance learning services; and

(E) to foster the use of digital and wireless networking technology to improve research and education, including scientific, mathematics, engineering, and technology instruction.

(3) APPLICATION AND REVIEW PROCEDURES.—

(A) IN GENERAL.—To be eligible to receive a grant, cooperative agreement, or contract under this subsection, an eligible institution shall submit an application to the Under Secretary at such time, in such manner, and containing such information as the Under Secretary may require. Such application, at a minimum, shall include a description of how the funds will be used, including a description of any digital and wireless networking technology to be acquired, and a description of how the institution will ensure that digital and wireless networking will be made accessible to, and employed by, students, faculty, and administrators. The Under Secretary, consistent with subparagraph (C) and in consultation with the advisory council established under subparagraph (B), shall establish procedures to review such applications. The Under Secretary shall publish the application requirements and review criteria in the Federal Register, along with a statement describing the availability of funds.

(B) ADVISORY COUNCIL.—The Under Secretary shall establish an advisory council to advise the Under Secretary on the best approaches to encourage maximum participation by eligible institutions in the program established under paragraph (1), and on the procedures to review proposals submitted to the program. In selecting the members of the advisory council, the Under Secretary shall consult with representatives of appropriate organizations, including representatives of eligible institutions, to ensure that the membership of the advisory council includes representatives of minority businesses and eligible institution communities. The Under Secretary shall also consult with experts in digital and wireless networking technology to ensure that such expertise is represented on the advisory council.

(C) REVIEW PANELS.—Each application submitted under this subsection by an eligible institution shall be reviewed by a panel of individuals selected by the Under Secretary to judge the quality and merit of the proposal, including

the extent to which the eligible institution can effectively and successfully utilize the proposed grant, cooperative agreement, or contract to carry out the program described in paragraph (1). The Under Secretary shall ensure that the review panels include representatives of minority serving institutions and others who are knowledgeable about eligible institutions and technology issues. The Under Secretary shall ensure that no individual assigned under this subsection to review any application has a conflict of interest with regard to that application. The Under Secretary shall take into consideration the recommendations of the review panel in determining whether to award a grant, cooperative agreement, or contract to an eligible institution.

(D) INFORMATION DISSEMINATION.—The Under Secretary shall convene an annual meeting of eligible institutions receiving grants, cooperative agreements, or contracts under this subsection to foster collaboration and capacity-building activities among eligible institutions.

(E) MATCHING REQUIREMENT.—The Under Secretary may not award a grant, cooperative agreement, or contract to an eligible institution under this subsection unless such institution agrees that, with respect to the costs incurred by the institution in carrying out the program for which the grant, cooperative agreement, or contract was awarded, such institution shall make available, directly, or through donations from public or private entities, non-Federal contributions in an amount equal to one-quarter of the grant, cooperative agreement, or contract awarded by the Under Secretary, or $500,000, whichever is the lesser amount. The Under Secretary shall waive the matching requirement for any institution or consortium with no endowment, or an endowment that has a current dollar value lower than $50,000,000.

(F) AWARDS.—

(i) LIMITATION.—An eligible institution that receives a grant, cooperative agreement, or contract under this subsection that exceeds $2,500,000 shall not be eligible to receive another grant, cooperative agreement, or contract.

(ii) CONSORTIA.—Grants, cooperative agreements, and contracts may only be awarded to eligible institutions. Eligible institutions may seek funding under this subsection for consortia which may include other eligible institutions, a State or a State education agency, local education agencies, institutions of higher education, community-based organizations, national nonprofit organizations, or businesses, including minority businesses.

(iii) PLANNING GRANTS.—The Under Secretary may provide funds to develop strategic plans to implement such grants, cooperative agreements, or contracts.

(iv) INSTITUTIONAL DIVERSITY.—In awarding grants, cooperative agreements, and contracts to eligible institutions, the Under Secretary shall ensure, to the extent practicable, that awards are made to all types of institutions eligible for assistance under this subsection.

(v) NEED.—In awarding funds under this subsection, the Under Secretary shall give priority to the institution with the greatest demonstrated need for assistance.

(G) ANNUAL REPORT AND EVALUATION.—

(i) ANNUAL REPORT REQUIRED FROM RECIPIENTS.—Each institution that receives a grant, cooperative agreement, or contract awarded under this subsection shall provide an annual report to the Under Secretary on its use of the grant, cooperative agreement, or contract.

(ii) INDEPENDENT ASSESSMENT.—Not later than 6 months after the date of enactment of this subsection, the Under Secretary shall enter into a contract with the National Academy of Public Administration to conduct periodic assessments of the program. The Assessments shall be conducted once every 3 years during the 10-year period following the enactment of this subsection. The assessments shall include an evaluation of the effectiveness of the program in improving the education and training of students, faculty and staff at eligible institutions that have been awarded grants, cooperative agreements, or contracts under the program; an evaluation of the effectiveness of the program in improving access to, and familiarity with, digital and wireless networking technology for students, faculty, and staff at all eligible institutions; an evaluation of the procedures established under paragraph (3)(A); and recommendations for improving the program, including recommendations concerning the continuing need for Federal support. In carrying out its assessments, the National Academy of Public Administration shall review the reports submitted to the Under Secretary under clause (i).

(iii) REPORT TO CONGRESS.—Upon completion of each independent assessment carried out under clause (ii), the Under Secretary shall transmit the assessment to Congress along with a summary of the Under Secretary's plans, if any, to implement the recommendations of the National Academy of Public Administration.

(H) DEFINITIONS.—In this subsection:

(i) DIGITAL AND WIRELESS NETWORKING TECHNOLOGY.—The term "digital and wireless networking technology" means computer and communications equipment and software that facilitates the transmission of information in a digital format.

(ii) ELIGIBLE INSTITUTION.—The term "eligible institution" means an institution that is—

(I) a historically Black college or university that is a part B institution, as defined in section 322(2) of the Higher Education Act of 1965 (20 U.S.C. 1061(2)), an institution described in section 326(e)(1)(A), (B), or (C) of that Act (20 U.S.C. 1063b(e)(1)(A), (B), or (C)), or a consortium of institutions described in this subparagraph;

(II) a Hispanic-serving institution, as defined in section 502(a)(5) of the Higher Education Act of 1965 (20 U.S.C. 1101a(a)(5));

(III) a tribally controlled college or university, as defined in section 316(b)(3) of the Higher Education Act of 1965 (20 U.S.C. 1059c(b)(3));

(IV) an Alaska Native-serving institution under section 317(b) of the Higher Education Act of 1965 (20 U.S.C. 1059d(b));

(V) a Native Hawaiian-serving institution under section 317(b) of the Higher Education Act of 1965 (20 U.S.C. 1059d(b)); or

(VI) an institution of higher education (as defined in section 365 of the Higher Education Act of 1965 (20 U.S.C. 1067k)) with an enrollment of needy students (as defined in section 312(d) of the Higher Education Act of 1965 (20 U.S.C. 1058(d)).

(iii) INSTITUTION OF HIGHER EDUCATION.—The term "institution of higher education" has the meaning given the term in section 101 of the Higher Education Act of 1965 (20 U.S.C. 1001).

(iv) LOCAL EDUCATIONAL AGENCY.—The term "local educational agency" has the meaning given the term in section 9101 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 7801).

(v) MINORITY BUSINESS.—The term "minority business" includes HUBZone small business concerns (as defined in section 3(p) of the Small Business Act (15 U.S.C. 632(p)).

(vi) MINORITY INDIVIDUAL.—The term "minority individual" means an American Indian, Alaskan Native, Black (not of Hispanic origin), Hispanic (including persons of Mexican, Puerto Rican, Cuban and Central or South American origin), or Pacific Islander individual.

(vii) STATE.—The term "State" has the meaning given the term in section 9101 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 7801).

(viii) STATE EDUCATIONAL AGENCY.—The term "State educational agency" has the meaning given the term in section 9101 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 7801).

XVIII. COMMITTEE RECOMMENDATIONS

On May 4, 2005, a quorum being present, the Committee on Science favorably reported the Minority Serving Institution Digital and Wireless Technology Opportunity Act of 2005, by unanimous consent, and recommended its enactment.

XIX. PROCEEDINGS OF THE FULL COMMITTEE MARKUP ON H.R. 921, MINORITY SERVING INSTITUTION DIGITAL AND WIRELESS TECHNOLOGY OPPORTUNITY ACT OF 2005

WEDNESDAY, MAY 4, 2005

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SCIENCE,
Washington, DC.

The Committee met, pursuant to call, at 10:17 a.m., in Room 2318 of the Rayburn House Office Building, Hon. Sherwood L. Boehlert [Chairman of the Committee] presiding.

Chairman BOEHLERT. Good morning. The Committee on Science will come to order.

Pursuant to notice, the Committee on Science meets to consider the following measures: H.R. 921, *Minority Serving Institution Digital and Wireless Technology Opportunity Act of 2005;* H.R. 1674, *U.S. Tsunami Warning and Education Act;* and H.R. 250, *Manufacturing Technology Competitiveness Act of 2005.* I ask unanimous consent for the authority to recess the Committee at any point during consideration of these matters. And without objection, that is so ordered.

We will now proceed with the markup, beginning with opening statements, and I will launch it.

I want to welcome everyone to this important markup. As usual, we have before us bills that represent bipartisan efforts to come up with practical solutions to real problems. These bills will advance education, protect our Nation and others from natural disasters, enhance research and environmental protection, and strengthen our economy. Not bad for one morning's work.

And I would add that while we are marking up these bills, we are also working behind the scenes on our portions of the Homeland Security reauthorization bill that was reported out of the Homeland Committee last week.

Let me talk briefly now about each of the bills before us to save time later.

First up is Mr. Forbes' bill to help minority serving institutions get the information technology equipment they need. This bill is identical to the version this committee approved last year, and the bill must also go through the Education and Workforce Committee. To move the bill forward swiftly, both sides of the aisle here have agreed to simply move the bill this morning by unanimous consent.

I think the bill will provide needed assistance to educational institutions that are essential to our efforts to develop more scientists and engineers from under-represented groups. And I think our version of the bill, which places the program in the Department of Commerce rather than the National Science Foundation, matches the program with the appropriate agency for carrying it out.

Our second bill will be the one I have introduced with Representative Inslee to ensure that the Nation and the world are better prepared to detect and respond to tsunamis. We all watched with horror last December as the Indian Ocean tsunami wreaked its devastation. Much of the death that occurred could have been avoided.

We have an obligation to learn more about tsunamis through research, to improve our ability to detect tsunamis and issue warnings about them, and to improve tsunami preparation and education so that we can limit damage and know what to do when the warnings come. This bill will improve research, detection, and education, and significantly, sets aside a proportion of appropriated funds for each of these essential activities.

The basis of this bill was the Administration's plan. The Administration is to be congratulated for its swift, thoughtful, and comprehensive response to last December's events. We then built on the Administration's proposal, following the guidance we received during our January hearing. As a result, the bill stresses and ensures funding for tsunami preparation and education. And we also press for tsunami detection to be integrated as much as possible with other Earth- and ocean-observing systems.

Finally, we will take up Dr. Ehlers' manufacturing bill, which the House passed last year. I know that, as was the case last year, we will have some debate over adding to the bill ideas that may be worthy in themselves, the proposals, but that would guarantee the demise of the bill. That is something we don't want to do. I will oppose most of these amendments, which include authorizing—I don't say all of them, because I haven't seen all of them. I will oppose most of the amendments, which include authorizing the Advanced Technology Program, a program that I have always supported and continue to support. But I want to make—actually, I want to make progress on the bill in connection with manufacturing. That is especially important as we enter the budget season with appropriations likely to be more constrained than ever.

And let me say at the outset that I don't want the amendment debate to obscure the broad, bipartisan support for the base bill, which the House passed last year by voice vote, no mean achievement given the political debate surrounding manufacturing last year.

We were going to also do a markup—during the markup this morning of the NOAA authorization bill, but both we and the Democrats have brought up significant additional changes to the bill. We need some more time to talk those through. We will reschedule the markup of the NOAA bill swiftly, and I would hope we could do it as early as next week.

So let me close by thanking my colleagues on both sides of the aisle for their contributions to these bills. As usual, we have beaten the odds and have worked out sensible, targeted, bipartisan measures.

[The prepared statement of Chairman Boehlert follows:]

PREPARED STATEMENT OF CHAIRMAN SHERWOOD L. BOEHLERT

I want to welcome everyone to this important markup. As usual, we have before us bills that represent bipartisan efforts to come up with practical solutions to real problems. These bills will advance education, protect our nation and others from natural disasters, enhance research and environmental protection and strengthen our economy. Not bad for one morning's work.

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I think the bill will provide needed assistance to educational institutions that are essential to our efforts to develop more scientists and engineers from under-represented groups. And I think our version of the bill, which places this program in the Department of Commerce rather than in the National Science Foundation, matches the program with the appropriate agency for carrying it out.

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The basis of this bill was the Administration's plan. The Administration is to be congratulated for its swift, thoughtful and comprehensive response to last December's events. We then built on the Administration proposal, following the guidance we received in our January hearing. As a result, the bill stresses and ensures funding for tsunami preparation and education, and we also press for tsunami detection to be integrated, as much as possible, with other Earth- and ocean-observing systems.

Finally, we will take up Dr. Ehlers' manufacturing bill, which the House passed last year. I know that, as was the case last year, we will have some debate over adding to the bill ideas that may be worthy in themselves, but that would guarantee the demise of this bill. I will oppose those amendments, which include authorizing the Advanced Technology Program, a program I have always supported and continue to support. But I want to actually make progress on manufacturing. That's especially important as we enter the budget season with appropriations likely to be more constrained than ever.

And let me say at the outset that I don't want the amendment debate to obscure the broad, bipartisan support for the base bill, which the House passed last year by voice vote—no mean achievement given the political debate surrounding manufacturing last year.

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So let me close by thanking my colleagues on both sides of the aisle for their contributions to these bills. As usual, we've beaten the odds and have worked out sensible, targeted, bipartisan measures.

Mr. Gordon.

Mr. GORDON. Thank you, Mr. Chairman.

Let me first thank you for moving NOAA to a later date so that we can have a chance—I am sure that this is something that we can work out. And there is, I think, general agreement on both the minority and the majority on this bill.

We are also pleased that the Committee is moving forward on its legislative agenda, and we look forward to continuing to work on a bipartisan basis on several major bills that we hope will be before the Committee shortly.

Today, we are addressing three important legislative areas. We applaud the choice of topics and only question why the Committee has not chosen to legislate more aggressively in certain of these areas, especially manufacturing. We support H.R. 921, the *Minority Serving Institution Digital and Wireless Technological Opportunity Act.* The bill would provide grants to minority serving institutions for information technology upgrades and for training faculty and staff to use the technology effectively in support of their education and research activities. Minority serving institutions prepare a growing portion of the future science and technology workforce of the Nation, and it is important that these colleges and universities be able to provide a quality education for their students.

H.R. 250, the *Manufacturing Technology Competitiveness Act,* is a start, but we need to make the bill's content live up to its title. Democratic Members of the Committee, once again, will be offering amendments to the MEP funding, workforce training, and technology innovation that would make the bill much stronger. Even if these pass, we will only have taken the first steps on one of the biggest problems of our day, and we hope we will have other opportunities this Congress to deal with the other aspects of this far-reaching problem.

We are especially pleased that the Committee, in a bipartisan fashion, has so rapidly developed H.R. 1674, the *United States Tsunami Warning and Education Act.* The bill directs NOAA to expand the current tsunami warning system on two basins so that all U.S. coastal areas and territories will be covered by a buoy-based detection and warning system. The bill also directs NOAA to conduct a community-based tsunami hazard mitigation program to ensure coastal communities are prepared to act upon any warning issued by the tsunami warning centers and establish a tsunami research program. We enthusiastically support the bill. We feel that the funding levels for hazard mitigation and education programs are too low. Mr. Wu's amendment would correct this problem.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Gordon follows:]

PREPARED STATEMENT OF REPRESENTATIVE BART GORDON

We are pleased that the Committee is moving forward on its legislative agenda and we look forward to continuing to work on a bipartisan basis on several major bills that we hope will be before the Committee shortly.

Today we are addressing four important legislative areas. We applaud the choice of topics and only question why the Committee has not chosen to legislate more aggressively in certain of these areas, especially manufacturing.

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Chairman BOEHLERT. Thank you.

Without objection, Members may place opening statements in the record at this point.

[The prepared statement of Mr. Forbes follows:]

PREPARED STATEMENT OF REPRESENTATIVE J. RANDY FORBES

H.R. 921, the *Minority Serving Institution Digital and Wireless Technology Opportunity Act of 2005,* is intended to strengthen and upgrade the technological infrastructure at Minority Serving Institutions, enabling these institutions to offer students the same access as their peers at other institutions of higher learning.

The Minority Serving Digital Institution and Wireless Technology Opportunity Act of 2005 would establish a new grant program that would provide up to $250 million to help Historically Black Colleges and Universities, Hispanic Serving Institutions, and Tribal Colleges bridge the digital divide. The grant program would be used to:

- Purchase digital and wireless network technologies and infrastructure equipment for campus wiring, equipment upgrades and hardware/software;
- Develop and provide technology education services, including faculty and teacher education;
- Provide technical assistance through workshops, distance learning and other technology applications;
- And foster the use of information communications technology to increase engineering, math and science research.

Sixty percent of all jobs require information technology skills and jobs in information technology pay significantly higher salaries than jobs in non-information technology fields. Today, Minority Serving Institutions lack the basic information and digital technology infrastructure needed to provide their students the necessary skills and access to compete and qualify for America's best paying jobs.

According to a recent report from the Department of Commerce:

- No Historically Black College or Universities (HBCUs) require computer ownership for their undergraduate students;
- 13 of the 80 HBCUs that participated in the study reported that no students owned computers (there are a total of 103 HBCUs);
- Over 70 percent of the students at HBUCs rely on the universities to provide computers, however only 50 percent provide students access to computers in computer laboratories, libraries, classrooms or other locations;
- Only three percent of HBCUs have financial aid available to help students close the computer ownership gap;
- One-third of the U.S. population uses the Internet at home, while only 16.1 percent of Hispanics and 18.9 percent of African Americans have Internet access at home.

This legislation is about much more than just equality in education; it is about economic advancement and ensuring that America retains its edge in the math, science and technology fields—a critically important requirement in today's increasingly competitive economic environment.

[The prepared statement of Ms. Johnson follows:]

PREPARED STATEMENT OF REPRESENTATIVE EDDIE BERNICE JOHNSON

Mr. Chairman, I would like to thank you for bringing this important legislation up today for a mark up. I am a proud co-sponsor of this legislation.

Just as we passed this legislation last session, I am still very much in support of its intent. Minority serving institutions will prepare a growing portion of the future science and technology workforce, simply because demographics dictate that minority students will comprise a greater and greater share of the Nation's college-aged population.

It is in the national interest to ensure that minority serving institutions have the capability to provide a quality education for their students. This includes the presence of an information infrastructure capable of supporting distance learning, research collaborations with partner institutions, and remote access to educational resources and national research facilities.

Unfortunately, the capability does not exist at most minority serving institutions. A recent report from the National Telecommunications and Information Administration documents the deficiencies in the information infrastructure of these colleges and universities. Although most institutions have some Internet access, it is generally not the high-speed access necessary to support distance education and research applications. More troubling, half of these institutions have no plan in place for upgrading their information technology infrastructure. Since minority serving institutions have significantly smaller budgets than other higher education institutions, and therefore less money for information technology support and upgrades, they will inevitably fall further behind as the technology continues its rapid advance.

The legislation up for markup today seeks to address this problem by providing grants to minority serving institutions for information technology upgrades and for training faculty and staff to use the technology effectively in support of their education and research activities.

Mr. Chairman, I want to thank you for allowing this bill to come up for markup and for your intent to move the legislation expeditiously. I urge my colleagues to support its passage.

[The prepared statement of Ms. Jackson Lee follows:]

PREPARED STATEMENT OF REPRESENTATIVE SHEILA JACKSON LEE

Mr. Chairman,

The bill before us today takes a critical step toward ensuring that all of our nation's young people have access to the education that will make them the leaders if tomorrow. I want to thank my colleague Mr. Forbes for reintroducing this needed piece of legislation. I am pleased to be a co-sponsor of this legislation just as I was in the 108th Congress. During that last Congress, I worked with Dr. Fred Humphries of NAFEO and Ms. Stephanie Myers to improve upon this legislation.

It is good to see improving the computing infrastructure at our minority serving institutions (MSIs) getting the attention and expertise it deserves. This is an excellent piece of legislation that acknowledges the profound nature of the digital divide, and puts forth the resources necessary to start to bridge it. The digital divide separates the Nation's minority serving institutions from other universities, but more importantly, it separates them from the vast stores of information, of data archived around the world, and separates them from potential collaborators and students as well. I am pleased to see the Science Committee showing strong commitment to this worthy bill.

Without excellent state-of-the-art computing and networking infrastructure, our HBCUs, tribal colleges, Hispanic universities, and those serving other minority groups, will never be able to place their students on the cutting edge, ready to take leadership positions in their respective fields. They will never be able to compete with richer universities for grant money for the big research programs. Of course, without that grant money, and without rich and powerful alumni, they will never be able to afford to purchase the infrastructure they need. We must break this cycle that is locking up the potential of these great institutions and their students.

Better connectivity will also let the world tap into the great expertise and resources that have been generated in the HBCUs and other MSIs over the years.

I am pleased that several provisions that I discussed with Dr. Humphries in hearings held during the last Congress here in the Science Committee were finally incorporated into this bill. Specifically, I am referring to the peer review provisions that will ensure that those people making decisions of what institutions receive grants,

will have an appreciation and understanding of the challenges and capabilities of our nation's minority serving institutes.

I hope that our colleagues here in the House display the same level of commitment to excellence in education and research as those here in the Science Committee, and will support the bill that comes out of this committee. If so, I am confident that this bill will enable our minority students and researchers to drive forward the march of science and technology, and not be left behind by it.

Thank you.

Chairman BOEHLERT. We will now consider H.R. 921, *Minority Serving Institution Digital and Wireless Technology Opportunity Act of 2005.*

I ask unanimous consent that the Committee favorably report H.R. 921—oh, we are doing this one on the—got it. I ask unanimous consent that the Committee favorably report H.R. 921 to the House with the recommendation that the bill do pass and that staff be instructed to prepare the legislative report and make necessary technical and conforming changes and that the Chairman take all of the necessary steps to bring the bill before the House for consideration.

I also ask unanimous consent that Members have two subsequent calendar days in which to submit supplemental, minority, or additional views on the measure. I move pursuant to Clause 1 of Rule 22 of the Rules of the House of Representatives that the Committee authorize the Chairman to offer such motions as may be necessary in the House to adopt and pass H.R. 921. Without objection, so ordered.

I want to thank the Members for their attendance and for their continued active participation in the deliberations of this committee.

We are adjourned.

[Whereupon, at 11:31 a.m., the Committee was adjourned.]

Appendix:

H.R. 921, Section-by-Section Analysis

I

109TH CONGRESS
1ST SESSION

H. R. 921

To establish a digital and wireless network technology program, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

FEBRUARY 17, 2005

Mr. FORBES (for himself, Mr. TOWNS, Mr. BAKER, Mr. ROSS, Mr. MARSHALL, Ms. EDDIE BERNICE JOHNSON of Texas, Mr. CROWLEY, and Mr. BISHOP of Georgia) introduced the following bill; which was referred to the Committee on Science, and in addition to the Committee on Education and the Workforce, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

---

A BILL

To establish a digital and wireless network technology program, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Minority Serving Institution Digital and Wireless Technology Opportunity Act of 2005".

SEC. 2. ESTABLISHMENT OF PROGRAM.

Section 5 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3704) is amended by inserting the following after subsection (f):

"(g) MINORITY SERVING INSTITUTION DIGITAL AND WIRELESS TECHNOLOGY OPPORTUNITY PROGRAM.—

"(1) IN GENERAL.—The Secretary, acting through the Under Secretary, shall establish a Minority Serving Institution Digital and Wireless Technology Opportunity Program to assist eligible institutions in acquiring, and augmenting their use of, digital and wireless networking technologies to improve the quality and delivery of educational services at eligible institutions.

"(2) AUTHORIZED ACTIVITIES.—An eligible institution may use a grant, cooperative agreement, or contract awarded under this subsection—

"(A) to acquire equipment, instrumentation, networking capability, hardware and software, digital network technology, wireless technology, and infrastructure to further the objective of the Program described in paragraph (1);

"(B) to develop and provide training, education, and professional development programs, including faculty development, to increase the

1 use of, and usefulness of, digital and wireless
2 networking technology;
3 "(C) to provide teacher education, includ-
4 ing the provision of preservice teacher training
5 and in-service professional development at eligi-
6 ble institutions, library and media specialist
7 training, and preschool and teacher aid certifi-
8 cation to individuals who seek to acquire or en-
9 hance technology skills in order to use digital
10 and wireless networking technology in the class-
11 room or instructional process, including instruc-
12 tion in science, mathematics, engineering, and
13 technology subjects;
14 "(D) to obtain capacity-building technical
15 assistance, including through remote technical
16 support, technical assistance workshops, and
17 distance learning services; and
18 "(E) to foster the use of digital and wire-
19 less networking technology to improve research
20 and education, including scientific, mathe-
21 matics, engineering, and technology instruction.
22 "(3) APPLICATION AND REVIEW PROCE-
23 DURES.—
24 "(A) IN GENERAL.—To be eligible to re-
25 ceive a grant, cooperative agreement, or con-

1 tract under this subsection, an eligible institu-
2 tion shall submit an application to the Under
3 Secretary at such time, in such manner, and
4 containing such information as the Under Sec-
5 retary may require. Such application, at a min-
6 imum, shall include a description of how the
7 funds will be used, including a description of
8 any digital and wireless networking technology
9 to be acquired, and a description of how the in-
10 stitution will ensure that digital and wireless
11 networking will be made accessible to, and em-
12 ployed by, students, faculty, and administra-
13 tors. The Under Secretary, consistent with sub-
14 paragraph (C) and in consultation with the ad-
15 visory council established under subparagraph
16 (B), shall establish procedures to review such
17 applications. The Under Secretary shall publish
18 the application requirements and review criteria
19 in the Federal Register, along with a statement
20 describing the availability of funds.
21 "(B) ADVISORY COUNCIL.—The Under
22 Secretary shall establish an advisory council to
23 advise the Under Secretary on the best ap-
24 proaches to encourage maximum participation
25 by eligible institutions in the program estab-

1 lished under paragraph (1), and on the proce-
2 dures to review proposals submitted to the pro-
3 gram. In selecting the members of the advisory
4 council, the Under Secretary shall consult with
5 representatives of appropriate organizations, in-
6 cluding representatives of eligible institutions,
7 to ensure that the membership of the advisory
8 council includes representatives of minority
9 businesses and eligible institution communities.
10 The Under Secretary shall also consult with ex-
11 perts in digital and wireless networking tech-
12 nology to ensure that such expertise is rep-
13 resented on the advisory council.
14 "(C) REVIEW PANELS.—Each application
15 submitted under this subsection by an eligible
16 institution shall be reviewed by a panel of indi-
17 viduals selected by the Under Secretary to
18 judge the quality and merit of the proposal, in-
19 cluding the extent to which the eligible institu-
20 tion can effectively and successfully utilize the
21 proposed grant, cooperative agreement, or con-
22 tract to carry out the program described in
23 paragraph (1). The Under Secretary shall en-
24 sure that the review panels include representa-
25 tives of minority serving institutions and others

1 who are knowledgeable about eligible institu-
2 tions and technology issues. The Under Sec-
3 retary shall ensure that no individual assigned
4 under this subsection to review any application
5 has a conflict of interest with regard to that ap-
6 plication. The Under Secretary shall take into
7 consideration the recommendations of the re-
8 view panel in determining whether to award a
9 grant, cooperative agreement, or contract to an
10 eligible institution.

11 "(D) INFORMATION DISSEMINATION.—The
12 Under Secretary shall convene an annual meet-
13 ing of eligible institutions receiving grants, co-
14 operative agreements, or contracts under this
15 subsection to foster collaboration and capacity-
16 building activities among eligible institutions.

17 "(E) MATCHING REQUIREMENT.—The
18 Under Secretary may not award a grant, coop-
19 erative agreement, or contract to an eligible in-
20 stitution under this subsection unless such in-
21 stitution agrees that, with respect to the costs
22 incurred by the institution in carrying out the
23 program for which the grant, cooperative agree-
24 ment, or contract was awarded, such institution
25 shall make available, directly, or through dona-

1 tions from public or private entities, non-Fed-
2 eral contributions in an amount equal to one-
3 quarter of the grant, cooperative agreement, or
4 contract awarded by the Under Secretary, or
5 $500,000, whichever is the lesser amount. The
6 Under Secretary shall waive the matching re-
7 quirement for any institution or consortium
8 with no endowment, or an endowment that has
9 a current dollar value lower than $50,000,000.
10 "(F) AWARDS.—
11 "(i) LIMITATION.—An eligible institu-
12 tion that receives a grant, cooperative
13 agreement, or contract under this sub-
14 section that exceeds $2,500,000 shall not
15 be eligible to receive another grant, cooper-
16 ative agreement, or contract.
17 "(ii) CONSORTIA.—Grants, coopera-
18 tive agreements, and contracts may only be
19 awarded to eligible institutions. Eligible in-
20 stitutions may seek funding under this
21 subsection for consortia which may include
22 other eligible institutions, a State or a
23 State education agency, local education
24 agencies, institutions of higher education,
25 community-based organizations, national

1 nonprofit organizations, or businesses, in-
2 cluding minority businesses.
3 "(iii) PLANNING GRANTS.—The
4 Under Secretary may provide funds to de-
5 velop strategic plans to implement such
6 grants, cooperative agreements, or con-
7 tracts.
8 "(iv) INSTITUTIONAL DIVERSITY.—In
9 awarding grants, cooperative agreements,
10 and contracts to eligible institutions, the
11 Under Secretary shall ensure, to the extent
12 practicable, that awards are made to all
13 types of institutions eligible for assistance
14 under this subsection.
15 "(v) NEED.—In awarding funds
16 under this subsection, the Under Secretary
17 shall give priority to the institution with
18 the greatest demonstrated need for assist-
19 ance.
20 "(G) ANNUAL REPORT AND EVALUA-
21 TION.—
22 "(i) ANNUAL REPORT REQUIRED
23 FROM RECIPIENTS.—Each institution that
24 receives a grant, cooperative agreement, or
25 contract awarded under this subsection

1 shall provide an annual report to the
2 Under Secretary on its use of the grant,
3 cooperative agreement, or contract.
4 "(ii) INDEPENDENT ASSESSMENT.—
5 Not later than 6 months after the date of
6 enactment of this subsection, the Under
7 Secretary shall enter into a contract with
8 the National Academy of Public Adminis-
9 tration to conduct periodic assessments of
10 the program. The Assessments shall be
11 conducted once every 3 years during the
12 10-year period following the enactment of
13 this subsection. The assessments shall in-
14 clude an evaluation of the effectiveness of
15 the program in improving the education
16 and training of students, faculty and staff
17 at eligible institutions that have been
18 awarded grants, cooperative agreements, or
19 contracts under the program; an evaluation
20 of the effectiveness of the program in im-
21 proving access to, and familiarity with, dig-
22 ital and wireless networking technology for
23 students, faculty, and staff at all eligible
24 institutions; an evaluation of the proce-
25 dures established under paragraph (3)(A);

1 and recommendations for improving the
2 program, including recommendations con-
3 cerning the continuing need for Federal
4 support. In carrying out its assessments,
5 the National Academy of Public Adminis-
6 tration shall review the reports submitted
7 to the Under Secretary under clause (i).
8 "(iii) REPORT TO CONGRESS.—Upon
9 completion of each independent assessment
10 carried out under clause (ii), the Under
11 Secretary shall transmit the assessment to
12 Congress along with a summary of the
13 Under Secretary's plans, if any, to imple-
14 ment the recommendations of the National
15 Academy of Public Administration.
16 "(II) DEFINITIONS.—In this subsection:
17 "(i) DIGITAL AND WIRELESS NET-
18 WORKING TECHNOLOGY.—The term 'dig-
19 ital and wireless networking technology'
20 means computer and communications
21 equipment and software that facilitates the
22 transmission of information in a digital
23 format.

1 "(ii) ELIGIBLE INSTITUTION.—The
2 term 'eligible institution' means an institu-
3 tion that is—
4 "(I) a historically Black college
5 or university that is a part B institu-
6 tion, as defined in section 322(2) of
7 the Higher Education Act of 1965 (20
8 U.S.C. 1061(2)), an institution de-
9 scribed in section 326(e)(1)(A), (B),
10 or (C) of that Act (20 U.S.C.
11 1063b(e)(1)(A), (B), or (C)), or a
12 consortium of institutions described in
13 this subparagraph;
14 "(II) a Hispanic-serving institu-
15 tion, as defined in section 502(a)(5)
16 of the Higher Education Act of 1965
17 (20 U.S.C. 1101a(a)(5));
18 "(III) a tribally controlled college
19 or university, as defined in section
20 316(b)(3) of the Higher Education
21 Act of 1965 (20 U.S.C. 1059c(b)(3));
22 "(IV) an Alaska Native-serving
23 institution under section 317(b) of the
24 Higher Education Act of 1965 (20
25 U.S.C. 1059d(b));

1 "(V) a Native Hawaiian-serving
2 institution under section 317(b) of the
3 Higher Education Act of 1965 (20
4 U.S.C. 1059d(b)); or
5 "(VI) an institution of higher
6 education (as defined in section 365
7 of the Higher Education Act of 1965
8 (20 U.S.C. 1067k)) with an enroll-
9 ment of needy students (as defined in
10 section 312(d) of the Higher Edu-
11 cation Act of 1965 (20 U.S.C.
12 1058(d)).
13 "(iii) INSTITUTION OF HIGHER EDU-
14 CATION.—The term 'institution of higher
15 education' has the meaning given the term
16 in section 101 of the Higher Education
17 Act of 1965 (20 U.S.C. 1001).
18 "(iv) LOCAL EDUCATIONAL AGEN-
19 CY.—The term 'local educational agency'
20 has the meaning given the term in section
21 9101 of the Elementary and Secondary
22 Education Act of 1965 (20 U.S.C. 7801).
23 "(v) MINORITY BUSINESS.—The term
24 'minority business' includes HUBZone
25 small business concerns (as defined in sec-

1 tion 3(p) of the Small Business Act (15
2 U.S.C. 632(p)).
3 "(vi) MINORITY INDIVIDUAL.—The
4 term 'minority individual' means an Amer-
5 ican Indian, Alaskan Native, Black (not of
6 Hispanic origin), Hispanic (including per-
7 sons of Mexican, Puerto Rican, Cuban and
8 Central or South American origin), or Pa-
9 cific Islander individual.
10 "(vii) STATE.—The term 'State' has
11 the meaning given the term in section
12 9101 of the Elementary and Secondary
13 Education Act of 1965 (20 U.S.C. 7801).
14 "(viii) STATE EDUCATIONAL AGEN-
15 CY.—The term 'State educational agency'
16 has the meaning given the term in section
17 9101 of the Elementary and Secondary
18 Education Act of 1965 (20 U.S.C.
19 7801).".

20 **SEC. 3. AUTHORIZATION OF APPROPRIATIONS.**

21 There are authorized to be appropriated to the Tech-
22 nology Administration of the Department of Commerce to
23 carry out section 5(g) of the Stevenson-Wydler Technology
24 Innovation Act of 1980—
25 (1) $250,000,000 for fiscal year 2006;

1 (2) $250,000,000 for fiscal year 2007;

2 (3) $250,000,000 for fiscal year 2008;

3 (4) $250,000,000 for fiscal year 2009; and

4 (5) $250,000,000 for fiscal year 2010.

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SECTION-BY-SECTION ANALYSIS OF H.R. 921, MINORITY SERVING INSTITUTION DIGITAL AND WIRELESS TECHNOLOGY OPPORTUNITY ACT OF 2005

Section 1. Short Title

"Minority Serving Institution Digital and Wireless Technology Opportunity Act of 2005."

Section 2. Establishment of the Program

Establishes the Minority Serving Institution Digital and Wireless Technology Opportunity Program within the Technology Administration of the Department of Commerce to assist minority-serving institutions (MSIs) in acquiring and augmenting their use of networking and information technology. Funds may be used to acquire equipment; develop and provide training, education and professional development programs related to the use of technology; provide teacher education, including pre-service and in-service professional development, library and media specialist training and pre-school and teacher aid certification in technology; obtain technical assistance; and foster the use of technology to improve research and education.

Establishes an Advisory Council, comprised of representatives of MSIs, minority businesses and others with expertise in technology, to help encourage maximum participation in the program.

Establishes a review panel, selected by the Under Secretary and includes representatives of MSIs and others who are knowledgeable about MSIs and technology issues, to judge the quality and merit of the proposals, including the extent to which the institution can effectively use the funds. The Under Secretary is required to consider the recommendations of the review panel in determining whether to award or deny funds.

Requires institutions to report annually to the Under Secretary on their use of the funds.

Requires the National Academy of Public Administration to conduct an independent assessment once every three years on the effectiveness of the program in improving the education and training as well as access to and familiarity with technology for students, faculty and staff. Also requires recommendations on the continuing need for federal support. Upon completion, requires the results of the independent assessment to be transmitted to the Congress.

Defines terms.

Section 3. Authorization of Appropriations

Authorizes $250 million for fiscal year 2006 and each of the following fiscal years through fiscal year 2010.

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