

**PREPARED REMARKS BY KAREN PELTZ STRAUSS**

**ON BEHALF OF**

**REHABILITATION ENGINEERING RESEARCH CENTER ON**

**TELECOMMUNICATIONS ACCESS AND THE**

**COALITION OF ORGANIZATIONS FOR ACCESSIBLE TECHNOLOGY**

COMMISSIONERS COPPS, MCDOWELL AND CLYBURN, THANK YOU FOR THE OPPORTUNITY TO PRESENT TO YOU TODAY ON BEHALF OF THE REHABILITATION ENGINEERING RESEARCH CENTER ON TELECOMMUNICATIONS ACCESS AND THE COALITION OF ORGANIZATIONS FOR ACCESSIBLE TECHNOLOGY (COAT), ON SOLUTIONS TO ENSURE THAT PEOPLE WITH DISABILITIES HAVE ACCESS TO BROADBAND SERVICES AND EQUIPMENT. MY COMMENTS FOCUS ON REGULATORY ACTION THAT SHOULD BE PART OF THE NATIONAL BROADBAND PLAN TO SAFEGUARD THE ABILITY OF ALL AMERICANS WITH DISABILITIES TO ACCESS BROADBAND TECHNOLOGIES.

**MARKETPLACE**

WHILE THERE MAY BE A GREATER AWARENESS OF THE NEEDS OF PEOPLE WITH DISABILITIES IN OUR SOCIETY, IT STILL REMAINS DIFFICULT FOR THE DISABILITY COMMUNITY TO EXERT SUFFICIENT MARKET PRESSURE TO GET TECHNOLOGY COMPANIES – WHO ARE TRYING TO MAKE THEIR PRODUCTS AND SERVICES MOST APPEALING FOR SPECIFIC SEGMENTS OF THE MASS PUBLIC – TO DEVOTE THE TIME AND RESOURCES NECESSARY TO PRODUCE ACCESSIBLE PRODUCTS AND SERVICES FOR DISABILITY POPULATIONS. FOR THIS REASON

CONGRESS AND THE FCC STEPPED IN MANY TIMES IN THE 1980S AND 1990S TO ENSURE ACCESSIBLE FEATURES ON TELECOM PRODUCTS AND SERVICES – THROUGH LAWS THAT REQUIRED CLOSED CAPTIONING, RELAY SERVICES, HEARING AID COMPATIBILITY AND OTHER FORMS OF ACCESS.

WE NOW FIND OURSELVES CONFRONTING NEW TECHNOLOGIES – BROADBAND TECHNOLOGIES – THAT HAVE OUTGROWN THESE LAWS. AND SO WE AGAIN TURN TO LAWMAKERS TO ENSURE THAT PEOPLE WITH DISABILITIES WILL NOT BE LEFT BEHIND AS THE REST OF THE NATION MOVES FORWARD IN MAKING THESE TECHNOLOGIES A DAILY PART OF THEIR LIVES – IN THEIR EMPLOYMENT, EDUCATION, CIVIC AND SOCIAL PARTICIPATION, AND HEALTH CARE. TO ACHIEVE THIS, AND TO ENSURE THAT PEOPLE WITH DISABILITIES ARE NOT AFFORDED SECOND-CLASS STATUS AS OUR NATION MIGRATES TO THE NEXT GENERATION OF ELECTRONIC COMMUNICATIONS, NEW LEGISLATIVE AND REGULATORY REQUIREMENTS CONTINUING THESE DISABILITY PROTECTIONS ARE NEEDED. INDEED THIS NEED WILL INTENSIFY IN THE COMING YEARS, AS THE NATION’S GROWING SENIOR CITIZEN POPULATION INCREASES THE NUMBER OF AMERICANS WITH VISION, HEARING, COGNITIVE AND MOBILITY DISABILITIES.

IN ORDER TO ACHIEVE THIS, COAT AND THE REHABILITATION ENGINEERING RESEARCH CENTER ON TELECOMMUNICATIONS ACCESS OFFER THE FOLLOWING POLICY SOLUTIONS:

FIRST, IT IS MOST IMPORTANT FOR ACCESSIBLE DESIGN TO BE INCORPORATED INTO NEW BROADBAND TECHNOLOGIES EARLY ON, WHEN THE

COST AND EFFORT ASSOCIATED WITH DOING SO REMAINS SMALL, RATHER THAN LATER, WHEN EXPENSIVE RETROFITTING WOULD BE REQUIRED. FORTUNATELY, MANY SUCH TECHNOLOGIES DEPEND LARGELY ON SOFTWARE, MAKING THIS MORE AFFORDABLE THAN EVER BEFORE. SUCH UNIVERSALLY DESIGNED BROADBAND PRODUCTS AND SERVICES NEED TO ENSURE REDUNDANT MEANS OF INSTALLING, ACCESSING, INTERFACING WITH, AND OPERATING BROADBAND FEATURES AND SERVICES. FOR EXAMPLE, THIS WOULD ACHIEVE:

- ACCESS TO TOUCH SCREENS, GRAPHICAL ICONS, TEXT, AND POINTING DEVICES FOR PEOPLE WHO ARE BLIND OR HAVE LOW VISION.
- RELIABLE AND INTEROPERABLE VOICE, REAL-TIME TEXT AND VIDEO ON A PHONE CALL – WITHOUT BARRIERS CREATED BY NETWORK OBSTRUCTIONS.
- BROADBAND SPEEDS SUFFICIENT TO ACCOMMODATE DYNAMIC MEDIA, THE CLEAR TRANSMISSION OF SIGN LANGUAGE, AUDIO DESCRIPTION SOUNDTRACKS, INTERACTIVE COMMUNICATIONS, AND WHERE APPLICABLE, EMERGENCY SERVICES IN ALL OF THE MODES USED BY PEOPLE WITH DISABILITIES.
- ASSURANCES THAT ACCESS FEATURES OR INFORMATION SUCH AS CLOSED CAPTIONING OR VIDEO DESCRIPTION ARE NOT STRIPPED DURING THEIR TRANSMISSION.

## **INFRASTRUCTURE**

WE HAVE ALREADY HEARD ABOUT ONE WAY THAT SOME OF THIS CAN BE ACHIEVED – BY BUILDING ACCESSIBILITY DIRECTLY INTO THE NATION’S BROADBAND INFRASTRUCTURE THROUGH A NEW *NATIONAL PUBLIC INCLUSIVE INFRASTRUCTURE* (NPII) THAT CAN ENSURE BASIC ACCESS BY PEOPLE OF ALL SOCIOECONOMIC LEVELS. FEW OF US WOULD CONSIDER BLOCKING PHYSICAL ACCESS TO LIBRARIES OR SCHOOLS. SIMILARLY, IF ACCESS TO THE INTERNET IS SO IMPORTANT, AND WE KNOW IT IS, EVERYONE SHOULD HAVE THIS ACCESS, INCLUDING PEOPLE WITH DISABILITIES AND PEOPLE WHO ARE AGING, SO THAT THESE INDIVIDUALS CAN STAY ENGAGED, CONTRIBUTING, AND INDEPENDENT MEMBERS OF SOCIETY.

IT IS TRUE THAT ASSISTIVE TECHNOLOGIES CAN HELP TO BRIDGE THE GAP AND FULFILL THE NEED FOR ACCESS IN MANY SITUATIONS. BUT WITH THE PACE OF INTERNET TECHNOLOGIES SPEEDING UP SO RAPIDLY, RELIANCE ON ASSISTIVE TECHNOLOGIES BECOMES DIFFICULT. THIS IS BECAUSE ALL TOO OFTEN THESE TECHNOLOGIES FALL BEHIND THE PACE OF EVER-EVOLVING INTERNET TECHNOLOGIES; THEY ARE ALSO OFTEN EXPENSIVE, HARD TO FIND, AND DO NOT CROSS VARIOUS PLATFORM SOLUTIONS. RESEARCHERS FROM THE TRACE CENTER AT THE U OF WISCONSIN ARE WORKING WITH OTHERS TO BUILD ACCESSIBILITY RIGHT INTO THE INFORMATION INFRASTRUCTURE, WHICH WOULD ALLOW FOR PEOPLE TO CALL UP INTERFACE FEATURES OR ADAPTATIONS THAT THEY NEED ANYTIME, ANYWHERE, AND ON ANY DEVICE THAT THEY ENCOUNTER,

ALLOWING ALL AMERICANS TO HAVE AFFORDABLE BASIC ACCESS TO THE INTERNET AND ITS RESOURCES.

THIS *NATIONAL PUBLIC INCLUSIVE INFRASTRUCTURE* WOULD CONSIST OF TWO PARTS:

1. THE BASIC STRUCTURE, TOOLS, RESOURCES, AND SECURITY FOR THE DEVELOPMENT AND SUPPORT OF A VARIETY OF ACCESS PRODUCTS AND FEATURES (PUBLICLY FUNDED) AND
2. AN *ECOSYSTEM FOR ACCESSIBILITY PRODUCTS AND FEATURES*, CONSISTING OF COMMERCIAL ASSISTIVE TECHNOLOGY (AT) COMPANIES, MAINSTREAM ICT COMPANIES, FREE AND OPEN SOURCE DEVELOPERS, AND INDIVIDUAL CONSUMERS, RESEARCHERS, AND OTHERS DEVELOPING A DIVERSE COLLECTION OF DIFFERENT COMMERCIAL AND PUBLIC ACCESSIBILITY PRODUCTS AND FEATURES THAT CAN BE MADE AVAILABLE ON DEMAND VIA THE INTERNET. (THIS WOULD BE PRIVATELY FUNDED EXCEPT FOR RESEARCH PROJECTS.). IN OTHER WORDS, THIS WOULD ENTAIL THE DEVELOPMENT OF FREE AND OPEN SOURCE ACCESS FEATURES THAT WOULD BE DISTRIBUTED THROUGH THE NPII ALONGSIDE COMMERCIAL ASSISTIVE TECHNOLOGIES

THE NEW INFRASTRUCTURE WOULD LOWER THE COSTS OF PROVIDING ACCESS AS INNOVATION TAKES PLACE, FACILITATE THE DEVELOPMENT OF ACCESS FOR UNDERSERVED DISABILITY

POPULATIONS, REDUCE DELAY IN ASSISTIVE TECHNOLOGY DEVELOPMENT, PROVIDE A MECHANISM TO CREATE 'UBIQUITOUS' ACCESSIBILITY TO MATCH TECHNOLOGY AS IT IS EVOLVING, AND MAKE IT EASIER FOR LIBRARIES AND OTHER PUBLIC ACCESS POINTS TO SERVE ALL PATRONS.

OTHER STEPS THAT OUR NATIONAL BROADBAND POLICY SHOULD TAKE INCLUDE THE FOLLOWING:

#### **UNIVERSAL SERVICE FUNDS**

BROADBAND SERVICES SHOULD BE MADE AFFORDABLE TO ALL PEOPLE WITH DISABILITIES BY MAKING LIFELINE AND LINK UP FUNDS AVAILABLE FOR THIS PURPOSE. WITH OVER 30 MILLION AMERICANS WHO HAVE HEARING LOSS, 10 MILLION WHO HAVE VISION DISABILITIES, AND AN ADDITIONAL SEVERAL HUNDRED THOUSAND WHO ARE DEAF-BLIND, IT IS ESTIMATED THAT EVEN IF A FRACTION OF THESE INDIVIDUALS WHO ARE BOTH LOW INCOME AND IN NEED OF IP-BASED COMMUNICATIONS SERVICES RECEIVED SUCH SUBSIDIES, MILLIONS OF AMERICANS WOULD BENEFIT. THE PERCENTAGE OF SUCH INDIVIDUALS WILL BE EVEN HIGHER AMONG OLDER AMERICANS WHO ARE LESS LIKELY TO BE EMPLOYED AND MORE LIKELY TO HAVE HEARING AND/OR VISION LOSS. ADDITIONALLY, BECAUSE THE INCIDENCE OF UNEMPLOYMENT IS SO HIGH WITHIN THE DEAF-BLIND COMMUNITY, IT IS ESTIMATED THAT AS MUCH AS 70 TO 80 PERCENT OF THAT POPULATION WOULD BE ABLE TO USE THIS TECHNOLOGY IF IT WERE MADE MORE AVAILABLE AND AFFORDABLE.

USF FUNDS SHOULD ALSO BE AVAILABLE FOR THE DISTRIBUTION OF SPECIALIZED CUSTOMER PREMISES EQUIPMENT TO PEOPLE WITH DISABILITIES, ESPECIALLY PEOPLE WHO ARE DEAF-BLIND. A FEDERAL-STATE PARTNERSHIP PROGRAM THAT DISTRIBUTES IP EQUIPMENT FOR INDIVIDUALS OTHERWISE UNABLE TO AFFORD SUCH EQUIPMENT WOULD HELP ENABLE THE ACQUISITION OF IP-BASED EQUIPMENT BY MANY INDIVIDUALS WHO ARE PRESENTLY UNABLE TO AFFORD SUCH EQUIPMENT.

## **OUTREACH**

NEXT, MORE NEEDS TO BE DONE TO EDUCATE PEOPLE WITH DISABILITIES ABOUT THE WAYS THAT BROADBAND SERVICES CAN IMPROVE THEIR LIVES. MANY SUCH INDIVIDUALS MAY NOT BE AWARE OF THE HUGE POTENTIAL OF THESE SERVICES TO HELP THEM AND ARE THEREFORE RELUCTANT TO PAY FOR THESE SERVICES. OUTREACH IS NEEDED TO EDUCATE THESE UNSERVED COMMUNITIES ABOUT THE WAYS THAT BROADBAND CAN HELP THEM GET JOBS AND EDUCATION, AND IMPROVE THEIR PRODUCTIVITY AND INDEPENDENCE ON A DAILY BASIS. IN ADDITION, OUTREACH IS NEEDED TO INFORM PEOPLE WITH DISABILITIES THAT ACCESSIBILITY SOLUTIONS EXIST FOR THEM. OTHERWISE, MANY WHO HAVE CONFRONTED ACCESSIBILITY BARRIERS WHEN TRYING TO ACCESS HIGH SPEED INTERNET SERVICES WILL CONTINUE ASSUMING THAT THERE IS NOTHING THAT CAN BE DONE TO ASSIST THEM. ONE WAY OF ACHIEVING SUCH OUTREACH IS TO FOSTER AND FUND COLLABORATIVE

EFFORTS WITH DISABILITY ADVOCACY GROUPS AND SERVICE PROVIDERS AS PARTNERS IN MARKETING, CONSUMER EDUCATION AND BROADBAND LEARNING INITIATIVES.

ACCOMPANYING SUCH OUTREACH SHOULD BE AN **FCC CLEARINGHOUSE** OF INFORMATION ON ACCESSIBLE PRODUCTS AND SERVICES. SUCH CLEARINGHOUSE SHOULD BE MADE PUBLICLY AVAILABLE ON THE COMMISSION'S WEBSITE AND BY OTHER MEANS, AND SHOULD INCLUDE AN ANNUALLY UPDATED LIST OF PRODUCTS AND SERVICES WITH ACCESS FEATURES.

## **RESEARCH**

NEXT, THE FCC SHOULD CONDUCT RESEARCH TO BETTER ASSESS THE EXTENT TO WHICH PEOPLE WITH DISABILITIES HAVE ADOPTED AND ARE USING BROADBAND BY LOOKING AT:

- THE RATE OF BROADBAND SUBSCRIBERSHIP AMONG COMMUNITIES OF PEOPLE WITH DISABILITIES;
- THE AFFORDABILITY OF BROADBAND SERVICES FOR THIS POPULATION;
- THE AFFORDABILITY OF ASSISTIVE AND ADAPTIVE TECHNOLOGIES TO USE BROADBAND;
- BARRIERS TO BROADBAND SUBSCRIBERSHIP BY THESE CONSUMERS;
- APPLICATIONS AND SERVICES LIKELY TO BE USED BY PEOPLE WITH DISABILITIES (E.G., VIDEO TELEPHONY FOR PEOPLE WHO ARE DEAF);

- ECONOMIC AND SOCIAL BENEFITS OF PROVIDING PEOPLE WITH DISABILITIES WITH BROADBAND SERVICES; AND
- REASONS OLDER AMERICANS FAIL TO ADOPT OR ABANDON BROADBAND TECHNOLOGY AS THEY ACQUIRE DISABILITIES, FOCUSING ESPECIALLY ON USABILITY/ACCESSIBILITY ISSUES

**FEDERAL GOVERNMENT SHOULD SERVE AS AN EXAMPLE – SECTION 508**

LAST, AND ONE OF THE MOST IMPORTANT POINTS THAT WE CAN MAKE, IS THAT THE FEDERAL GOVERNMENT, THROUGH ITS AGENCIES, EXECUTIVE, AND LEGISLATIVE BRANCHES, NEEDS TO BEGIN SERVING AS A MODEL OF BROADBAND ACCESSIBILITY IN FULL COMPLIANCE WITH SECTION 508 OF THE REHABILITATION ACT. IT IS A SAD BUT TRUE FACT THAT COMPLIANCE WITH SECTION 508 IS NOT EFFECTIVELY ENFORCED. ROUTINELY, WE LEARN OF FEDERAL AGENCIES PRODUCING WEBSITES, VIDEOS, AND ELECTRONIC INFORMATIONAL MATERIALS THAT ARE NOT ACCESSIBLE TO PEOPLE WITH DISABILITIES. AS PART OF ITS NATIONAL BROADBAND PLAN, THE FEDERAL GOVERNMENT SHOULD DEVISE A MEANS OF SIGNIFICANTLY IMPROVING IMPLEMENTATION AND ENFORCEMENT OF THIS SECTION’S IMPACT ON BROADBAND ACCESS WITHIN ALL FEDERAL AGENCIES. AN ONGOING AND OPEN ASSESSMENT OF ALL FEDERAL AGENCY ACTIONS, MADE PUBLICLY AVAILABLE AND UPDATED REGULARLY, IS NEEDED TO ALLOW OPEN MONITORING OF HOW EACH AGENCY IS DOING WITH RESPECT TO ITS SECTION 508 OBLIGATIONS. THIS WOULD ALLOW AGENCIES TO KNOW WHERE THEY STAND WITH RESPECT TO OTHER AGENCIES, AND PROVIDE INCENTIVES TO IMITATE OTHER AGENCIES

THAT MIGHT BE EXCELLING IN PARTICULAR AREAS. SECOND, IT WOULD ALLOW THE PUBLIC TO HAVE ACCESS TO INFORMATION AT ANY TIME ABOUT THE EXTENT TO WHICH A PARTICULAR AGENCY IS COMPLYING WITH ITS ACCESSIBILITY OBLIGATIONS. CONSISTENT WITH THIS APPROACH, MEMBERS OF THE DISABILITY COMMUNITY SHOULD HAVE AN OPPORTUNITY TO EVALUATE PRODUCTS AND SERVICES USED WITH BROADBAND SERVICES THAT ARE BEING CONSIDERED FOR PROCUREMENT BY FEDERAL AGENCIES SO THAT THEY COULD LEND THEIR EXPERTISE IN A WAY THAT WOULD BENEFIT BOTH AGENCIES AND THE CONSUMING PUBLIC.

**INTERAGENCY FORUMS FOR THE FOLLOWING:**

THE FCC SHOULD PLAY A ROLE IN DEVELOPING INTERAGENCY FORUMS FOR THE FOLLOWING PURPOSES:

- COMPLIANCE WITH SECTION 508 – FEDERAL AGENCIES NEED TO KNOW WHAT EACH OTHER ARE DOING TO ACHIEVE CONSISTENCY IN THEIR COMPLIANCE;
- THE PROVISION OF EMERGENCY ACCESS SERVICES – NEXT GENERATION E-9-1-1 ISSUES CROSS MULTIPLE FEDERAL AGENCIES;
- COORDINATION WITH THE DEPARTMENT OF JUSTICE SHOULD TAKE PLACE ON PORTIONS OF TITLES II AND III OF THE AMERICANS WITH DISABILITIES ACT THAT DEAL WITH COMMUNICATIONS;
- DEVELOPMENT AND IMPLEMTATION OF THE NATIONAL PUBLIC INCLUSIVE INFRASTRUCTURE – COLLABORATION WILL BE NEEDED, BASED ON EACH AGENCY’S MISSION, ON MATTERS CONCERNING FUNDING FOR THE NPIL, RESEARCH INTO EFFECTIVE ACCESS APPROACHES, AND OTHER RELATED IMPLEMENTATION MATTERS.

**INDUSTRY-CONSUMER FORUMS**

IN THE PAST THERE HAVE BEEN A NUMBER OF SUCCESSFUL COLLABORATIONS BETWEEN CONSUMERS AND INDUSTRY – FOR EXAMPLE,

- FCC-LED NEGOTIATED RULEMAKING ON HAC REQUIREMENTS FOR WIRELINE TELEPHONES (mid 1990s)
- INDUSTRY-LED CONSENSUS BUILDING (THOUGH THE ALLIANCE FOR TELECOMMUNICATIONS INDUSTRY SOLUTIONS (ATIS) ON HAC MANDATES FOR WIRELESS PHONES (EARLY 2000s)
- TELECOMMUNICATIONS ACCESS ADVISORY COMMITTEE (FOR DEVELOPMENT OF SECTION 255 GUIDELINES),
- TELECOMMUNICATIONS AND ELECTRONIC AND INFORMATION TECHNOLOGY ADVISORY COMMITTEE (FOR PROPOSED REVISIONS TO CURRENT GUIDELINES ON SECTIONS 508 AND 255)

THERE ARE A NUMBER OF FUTURE AREAS WHERE CONSUMER-INDUSTRY EFFORTS WOULD BE APPROPRIATE:

- DEVELOPMENT OF INDUSTRY-WIDE STANDARDS, PROTOCOLS AND PROCEDURES NEEDED FOR THE INCLUSION OF CLOSED CAPTIONING AND VIDEO DESCRIPTION ON VIDEO PROGRAMMING SHOWN ON THE INTERNET (ALREADY OCCURRING FOR CAPTIONING THROUGH THE SOCIETY FOR MOTION PICTURE TELEVISION ENGINEERS); AND
- DEVELOPMENT OF TECHNICAL STANDARDS, PROTOCOLS AND PROCEDURES NEEDED TO ENABLE THE NAVIGATION AND SELECTION OF VIDEO PROGRAMMING ON NEW TYPES OF IP-BASED EQUIPMENT ACCESSIBLE TO PEOPLE WHO ARE BLIND OR HAVE VISION LOSS.

## **CONCLUSION**

IN CONCLUSION, IT IS CRITICAL FOR THE FCC TO MAKE RECOMMENDATIONS IN THE NATIONAL BROADBAND PLAN THAT ADDRESS THE BROADBAND NEEDS OF ALL AMERICANS WITH DISABILITIES – INCLUDING THOSE OF US WHO ARE PART OF OUR RAPIDLY AGING POPULATION AND REGARDLESS OF SOCIOECONOMIC STATUS. THE ABOVE PROPOSALS OFFER CONSIDERABLE GUIDANCE TO ENSURE THAT THESE INDIVIDUALS CAN EFFECTIVELY USE BROADBAND SERVICES AND EQUIPMENT TO COMMUNICATE, LIVE INDEPENDENTLY AND BE PRODUCTIVE.