Executive Summary

Executive Summary A. The boundless, sweeping distances between remote communities in Nevada make the delivery of adequate health care, a challenge equal to that faced by any undeveloped, emergent country in the world. Many rural communities in Nevada are geographically isolated from most if not all medical services. However, the latest broadband technologies and services can virtually eliminate the barriers of time and distance to medical care. A significant number of sites in the MaxCare service area are more than two hours away from a major medical facility. The driving time alone creates a daunting, sometimes insurmountable trip for vulnerable people who do not have public or private transportation within their means, and who may delay getting care until a condition escalates to an imperiled situation. The MaxCare Division of the International Air and Space Educational Foundation (IASEF) in Las Vegas, Nevada aims to reduce that challenge significantly by implementing an enhanced Telemedicine support network. By deploying Rural Access Care Sites (RACS), Mobile Exam Vehicles (MEVs), and establishing Healthcare Information Centers throughout the state of Nevada this program will improve and expand the state’s broadband adoption rate. Tens of thousands of Americans in remote, isolated areas such as Arctic villages, Native American reservations, rural communities, and prisons are now accessing healthcare via broadband based services. Many more are being diagnosed, treated, and monitored from ships at sea, battlefields, urban centers, and homes via the same types of services. Yet, only a fraction of the potential for broadband services has been realized in hard to reach areas of Nevada where the need is urgent. According to the Pew Research Center, a nonpartisan fact tank that provides information on the issues, attitudes, and trends shaping America and the world through public opinion polling, '61% of adults look for healthcare information online from http://www.pewinternet.org/Press-Releases/2009/The-Social-Life-of-Health-Information.aspx'. In "The Social Life of Health Information," they go on to say how American adults use the internet to gather and share health information, and how the landscape has shifted in the last decade. In 2000, 46% of American adults had access to the internet, 5% of U.S. households had broadband connections, and 25% of American adults looked online for health information. Now, 75% of American adults go online, and 57% of American households have broadband connections. Further, many adults now have wireless access to the internet. ' However, in rural Nevada this number is much lower. To address this need MaxCare Healthcare Information Centers will provide convenient places for citizens to get online and increase usage of broadband dramatically. B. MaxCare will also provide much needed medical services at the Rural Access Care Sites (RACS) and using the Mobile Exam Vehicles (MEVs). Specifically, MaxCare will create the broadband technology conduit for this innovative medical care to connect patients to physicians throughout the state. Although broadband based videoconferencing is currently being used
in telemedicine applications within hospitals and clinics throughout the country, the MaxCare project is taking this to the next level by introducing Mobile Exam Vehicles (MEVs) to further service outlying areas in Nevada. The MEVs will bring the patients to the doctors via videoconference. It will provide vital signs and infrared digital imaging, enhance the visual images of all patients, and will transmit important triage data to the examining facility in real time. It will also provide patient access to Rural Area Care Sites (RACS) and hospitals thru the use of the broadband based videoconference technology. This program will drive increased broadband usage at rural clinics, urgent care centers, and major hospitals and universities. Almost 500,000 patient encounters using broadband telemedicine connections will be conducted at the MaxCare sites each year. Healthcare, education, and training will be offered online using recording devices that allow desktop pc participants to view live or archived streaming video that further increases broadband adoption. Healthcare and education courses, such as continuing medical education, general health information, nursing and allied health courses, and disease management and prevention will be offered at all sites and online to students at home. In addition to critical healthcare support, citizens will gain access to crucial early intervention information, proactive healthcare strategies, potential healthcare careers, and other job related information. C. MaxCare will provide broadband access to citizens in the state of Nevada in a number of ways. These services will enable vulnerable populations, including Hispanic and Latin Americans, African-American, families and individuals living below the poverty level/unemployed, youths, Native Americans, and seniors to access healthcare and education at minimal or no cost. Nevadans throughout the state will be accessing MaxCare services at RACS located at healthcare providers, clinics, libraries, schools, colleges and universities sites. Over sixty eight (68) locations have been identified in thirty six (36) cities throughout Nevada, which has a total population of 2,643,085 according to the most recent U.S. Census Bureau, Population Division data. In addition to these fixed locations, the mobile exam vehicles (MEVs) will provide facilities for patients to visit with doctors and medical professionals, as well as broadband based tools to access training and information online. D. The International Air and Space Educational Foundation (IASEF), and its MaxCare division, has the organizational structure in place to support program objectives and to make this program successful. The key management, technical, and medical partners are already in place to efficiently implement technical components and medical applications. More than sixty-eight anchor institution sites have provided letters of support and commitment to this project. IASEF is ideally positioned as the applicant for the Sustainable Broadband Adoption grant because of their established collaborative relationship with non-profit partners such as hospitals and the UNLV - National Supercomputing Center for Energy and the Environment (NSCEE). For the last 10 years, Scott Fisher, President of IASEF has worked extensively with large-scale projects and has assembled an exceptional team to execute the MaxCare vision. He has enormous experience in building and sustaining notable projects, as detailed in the attached document labeled SF Profile - Financial and Project Info. The aggregate strength, background, and experience of the MaxCare organization delivers unquestionable viability to this project. IASEF’s contribution to the remote Mars Research Analog Facility in 2001, which studied Telemedicine applications aboard this research lab designed to monitor the health of Astronauts. Today IASEF, through MaxCare, is working with Nevada researchers and NASA on The Nevada Space Grant Consortium to design extraterrestrial habitation facilities and continue the study of telemedicine technologies. Key Organizational Partners involved with the MaxCare program are: 1. University of Nevada School of Medicine & Telehealth Network 2. UNLV - National