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AVATARMEDIC: A 21ST CENTURY PARADIGM FOR PROVIDING MEDICAL CARE AND
HEALTH ACCESS FOR SPACE EXPLORATION AND CREATING THE NEXT GENERATION
SOLAR-SYSTEM WIDE MEDICAL CAPABILITIES FOR HUMANITY AND MULTI-PLANETARY
SETTLERS

Abstract

As Humanity's vision to venture outward into the Universe and beyond Earth Low Orbit is manifesting into reality, we are, however, still battling a global crisis in our current medical systems under the enormous challenge of a pandemic affecting billions of humans exacerbating the health and medical problems here on Spaceship Earth. The need is growing for an omnipresent medical capability layer, acting as a unified holistic framework and service to enable any medical procedure, anytime, anywhere even when no trained personnel are available. Thus, we propose the AvatarMEDIC INC vision of an integrated 'holistic' approach system to provide non-medical persons, medical experts, emergency responders, including astronauts, the ability to quickly respond to challenges in emergency and wilderness medicine scenarios, support medical triage protocols, provide basic and advanced cardiac life support training and interventions (BLS/ACLS), teleanesthesia-telesurgery training, and aid in Search and Rescue (SAR) during disaster relief and war zones. AvatarMEDIC will have the ability to adapt to a variety of emergency scenarios and be deployable locally, globally and beyond Earth's orbit in Space, Moon and Mars. Leveraging the convergence of Artificial General Intelligence, 3D printing, Blockchain, Augmented Reality and Mixed Reality (AR/MR) haptics and robotics, along with novel applications of ultrasonic and laser technologies to create an integrated "holistic system" to address the myriad of challenges in the fields of emergency medicine, telemedicine, disaster relief, microgravity search and rescues. A 21st Century new paradigm for augmenting and extending healthcare services and medical access into remote and first response settings. Impacting and saving lives for billions of people on Earth and in space. This paper will focus on connecting the vision of the AvatarMEDIC to the current technology abilities and market-ready products to test and validate the needed components of the vision. Highlighting current Mixed Reality training software HoloTRIAGE for first response skills and testing underway in MMAARS INC * Mars0Moon Astronautics Academy and Research Science) analog astronaut simulations dubbed "Space Medics", and participating in the ANA Avatar XPRIZE building telerobotic medical intervention systems with full bidirectional sensorium immersion. The vision of the full AvatarMEDIC system is a vision which will enable "Realtime, Remote, Medical Relief" throughout the solar system.