

22nd SYMPOSIUM ON SPACE ACTIVITY AND SOCIETY (E5)
Verifying and Validating the Impact of Technology Transferred from Space (2)

Author: Mr. Douglas Comstock
National Aeronautics and Space Administration (NASA), United States, doug.comstock@nasa.gov

Mr. Daniel Lockney
NASA, United States, daniel.p.lockney@nasa.gov
Mr. Coleman Glass
Georgetown University & NASA Headquarters, United States, cole.glass@nasa.gov

A STRUCTURE FOR CAPTURING QUANTITATIVE BENEFITS FROM THE TRANSFER OF
SPACE AND AERONAUTICS TECHNOLOGY

Abstract

Since the advent of the space program there has been a steady stream of public benefit around the world from the earthly applications of technologies developed for space and aeronautics applications. There have been numerous studies and approaches developed for generalizing the measure of these benefits, but none have been broadly accepted or consistently adopted. Many anecdotal examples have given snapshots of quantitative benefits but there exists no structured method of systematically collecting and validating benefits. NASA has developed an approach to begin systematic collection of quantitative benefits from the transfer of space and aeronautics technology. This approach identifies a small number of quantitative measures that capture the predominant categories of benefits. In some cases the benefits can be fully attributed to the original NASA technology, although in most cases the application of NASA technology is a contributing factor in the innovation that has ultimately generated the benefits. The definition of these measures was shaped by analysis of the last several years of technology transfer successes published in NASA's annual Spinoff document. NASA is beginning to implement the collection and validation of these measures in the process of writing and documenting future Spinoff stories, and in retrospectively beginning to collect information from previously published Spinoff stories. This paper presents the structure NASA is beginning to implement and summarizes the quantitative benefits that have been collected.