

Defense Threat Reduction Information Analysis Center Serving the Nation for 50 Years

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Tucked away on Kirtland AFB, New Mexico resides an organization of vital importance to the nation and in 2011 marks its 50th anniversary. That organization which began in 1961 would grow and transform over the next 50 years to become what is known today as the Defense Threat Reduction Information Analysis Center or DTRIAC. A key organization in the nuclear and radiation research community, DTRIAC maintains the largest collection of nuclear-related information in the nation, and arguably the world. The DTRIAC serves as the DoD's official repository for all scientific and technical data pertaining to nuclear weapons and is the largest of the DoD's 19 Information Analysis Centers.

The Defense Atomic Support Agency (DASA) Data Center, DTRIAC's earliest predecessor, began in July 1961 in a contractor's facility in Santa Barbara, California. DASA's origin actually began in the late 1940's as the Armed Forces Special Weapons Project (AFSWP) and was established as the primary agency responsible for the DoD side of US nuclear weapons development and custody. In 1959 AFSWP was renamed DASA.

The rationale for the establishment of the DASA Data Center was spelled out in a study called Quick Key. This study pointed out that with the 1958 moratorium on nuclear weapons testing following the Hardtack Test Series, the expertise on nuclear weapons effects was no longer as centralized as it once was as knowledgeable researchers dispersed to other areas in which funding support was available.

This was a serious problem as the high-altitude shots of Yucca, Teak, Orange and the Argus series had revealed effects that were not well understood but were critical issues in ballistic missile defense; a topic beginning to gain serious attention. Among the key issues were atmospheric and ionospheric disturbances resulting in radar blackout, communications outages, interference with optical sensors, electro-magnetic pulse (EMP) generation and trapped radiation depletion and enhancement.

The community of researchers and analysts that had been assembled for the 1958 high altitude tests represented some of the most prominent organizations, labs, and personnel typically associated with nuclear tests at the time. This community also included new contractors whose interests and

capabilities were in electromagnetic effects. This contractor group was especially vulnerable to the personnel dispersing after the test moratorium.

The DASA Data Center was expected to provide a focus for this community. The Center was expected to collect all information, both open source and classified, pertinent to the subject of the effects of high-altitude detonations, and provide an accessible library of this information staffed by personnel knowledgeable in the subject matter. The Center was also expected to provide reviews and assessments, announcements of pertinent publications, and special reports as required.

The DASA Data Center began these activities by publishing the proceedings of an ARPA-sponsored symposium on Ballistic Missile Defense, held at the contractor's facility in Santa Barbara, as its first review. The collection of pertinent technical reports, books and instrumentation files began. Then, at the end of August 1961 after the Russians resumed nuclear testing, after only two months of operations, the DASA Data Center's evolution was markedly affected as DASA prepared for the U.S. resumption of nuclear testing. (Santa Barbara Facility circa 1968 pictured)



Among the subsequent critical tests conducted was the 1962 Fishbowl test series which was the high-altitude phase of the larger Operation Dominic. Perhaps the officer at DASA most responsible for the DoD aspects of that series was Lt Col Billy McCormac who was also the project officer for the DASA Data Center contract. Lt Col McCormac was not only a PhD physicist, but also a knowledgeable bureaucrat who had a clear vision of what he wanted done. He wanted the Center to become of more use to DASA as a whole rather than being limited to the Radiation Branch which was the funding group. Publication and other information services were subsequently rendered to the Airblast, Thermal, and Electronic Vulnerability Branches during these early years with funding issues being worked out on a trade off between project officers.

Lt Col McCormac, and those that worked for him, labored to achieve an expanded vision. He saw in the DASA Data Center a tool to be used in the coordination of pre-test planning and in the rapid dissemination of test results. The first such special report was thus created and was actually carried to Johnston Island as an on-site coordination aid.

The DASA Data Center was clearly by definition and by function an activity that fell under the rubric of an Information Analysis Center (IAC), a term that became increasingly used in the early 1960's. An IAC was defined as an

activity that not only collected information on a narrow topic area, but also acted as a reference source and network for interested users.

The DoD at that time sponsored several such IACs and in 1964 named the DASA Data Center as one of them and renamed it the DASA Information Analysis Center or DASIAC. Thus it became DoD's IAC for nuclear weapons effects. Its control from its inception in 1961 to the present was always DASA or its successors. In the mid-60's DASA began a process of assigning to DASIAC a variety of information activities that for one reason or another were best placed within this IAC. A major interest area in the 1960's was the effects on communications equipment from high-altitude nuclear blasts.

The 1970s saw DASIAC develop an increased interest in x-ray and EMP effects and considered blast and ground shock associated with low-altitude and surface detonations. DASIAC also supported the Agency's interest in simulation activities and testing and began publishing technical handbooks to provide weapons effects information in an authoritative form. In 1971 when DASA became the Defense Nuclear Agency (DNA), the new organization decided to retain DASIAC as the accepted name of the IAC.

The DASIAC continued with its traditional emphasis throughout the 1980's but also began to branch out into other areas: Strategic Defense Initiative research, policy analysis, tactical warfare and non-nuclear areas. It also began to conduct research related to treaty verification. During this period, the film collection increased significantly, consisting of still photos, motion picture films, and videotapes from both atmospheric and underground nuclear tests and simulation programs. These media provided documentary record of experiment setup, execution and post-test analysis. They also provided record of explosion phenomena that can affect military concepts and construction of structures.

The 1990's saw the DASIAC's technical area task workload increase significantly and the collection expanded as the staff began to seek out and obtain orphaned collections. As the agency mission changed, so did the DASIAC as it began adding both conventional high explosives and Chemical-Biological data to its archives. Also during this period a significant decision was made to develop, operate, and maintain an electronic database. The Data Archival and Retrieval Enhancement (DARE) system was created and designed to contain all of the scientific and technical information (STI). The DASIAC was the first DOD IAC to create and adopt this capability which provided data at an approved user's desktop and greatly increased the value and utility of the IAC to the government and scientific community.

The 1990's also brought about relocation and organizational changes. The Santa Barbara facility which has served since 1961 was relocated to DNA field Command facilities at Kirtland AFB in 1995. DNA was then succeeded by the Defense Special Weapons Agency (DSWA) in 1996 but only for two years.

The latest organizational transformation was the creation of DTRA in 1998. It was shortly thereafter in 2000 that the DASIAC, a name which had existed for 39 years, was renamed the DTRIAC. Throughout five decades of change, the DTRIAC has been a vital resource of nuclear and radiological information to the nation and its nuclear research community.

Over the course of the past 50 years, DTRIAC has been well-served by ITT Corporation and its predecessors. General Electric Technical Military Planning Operations (GE TEMPO) was instrumental in standing up the organization and operated it for the first 20 years from its beginning in 1961 until 1981. Kaman Sciences Corporation then took the helm until 1997 and since that point ITT Industries has been the lead in DTRIAC operations.

Today, the DTRIAC has a focused initiative in place to preserve and digitize the backlog of approximately 10 million feet of film and approximately 230,000 documents. A vast amount of digitized data is already available via the Scientific Technical Information and Archival Research System (STARS) which replaced DARE in 2007. STARS contains over 400,000 abstracts and 150,000 media files available for download. A variety of new system enhancements will soon make research efforts quicker, easier and more productive for STARS users. The DTRIAC staff is located on Kirtland AFB, New Mexico and in the STI Center in DTRA Headquarters on Fort Belvoir, Virginia. The staff prides themselves on superior customer service and, as they have been for the last 50 years, stands ready to support the ever-evolving needs of the Research and Development community and the Warfighter.



* Footnote - Many of the historical inputs to this article are due to the efforts of Edwin J. Martin to put pen to paper in order to create an unofficial document that traced some of the key events and origins of the DASIAC. Mr. Martin was the first full-time hire for the DASA Data Center and continued this full-time effort almost continuously from November 1961 through the end of 1995. The DTRIAC acknowledges and thanks him for his efforts.