

Plan Overview

A Data Management Plan created using DMPTool

DMP ID: <https://doi.org/10.48321/D1R049>

Title: Modernization of ATD Apparel

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Template: U.S. Department of Transportation: Data Management Plan (DMP)

Project abstract:

FAA AC 25.562-1B and SAE AS 8049-C require specific ATD clothing that is no longer readily acquired or has changed significantly. This apparel includes US Air Force defined shoes, which have changed from a slick sole to a non-slip sole, and 100% cotton stretch garments, which are no longer manufactured. The change to the sole of the shoe may prevent the ATD's legs from freely swinging during a test. The release of the legs is required during a horizontal test for seat places without foot pedals and can change the head path. A change from 100% cotton to polyester clothing may alter the sliding of the occupant along the seat back cushion during a combined horizontal-vertical test and may alter the sliding of the lap belt on the pelvis (affecting the risk of submarining). Because these changes may alter the response of the ATD during dynamic impact tests, use of apparel different than what is specified may require a deviation before the test data can be accepted by the FAA. This project will investigate any differences in ATD kinematics caused by the modern clothing and provide the FAA policy makers with information to update guidance material on the subject.

Start date: 01-01-2021

End date: 09-30-2021

Last modified: 01-19-2024

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Modernization of ATD Apparel

Change Log:

7/29/2021: Initial DMP

8/4/2021: Review for DMP workshop

9/22/2021: DMP Updates

9/15/2022: Added Funding Org - needs additional updates due to re-baseline

5/22/2023: Corrections/Updates to DMP

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0. Dataset and Contact Information:

Name of Project: MODERNIZATION OF ATD APPAREL

Project Number: 14.2 DYN-10086

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U.S. Department of Transportation, Federal Aviation Administration, Civil Aerospace Medical Institute,

URL:https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/aam/cami/

Initial DMP: 7/29/2021

1. Data Description:

One data set will include sled test data used to evaluate the affect of clothing on ATD response. The second data set will be an ATD pelvis response to loading statically and dynamically.

This project will investigate any differences in ATD kinematics caused by the modern clothing and effects on an ATD pelvis due to loading. This project will provide the FAA policy makers with information to update guidance material on the subject.

Sensor output, pre & post test pictures, high speed video, and photometric results are provided.

This data is created by physical experiments. Sensors include load cells and accelerometers. Data set also included video from high speed cameras and photos from still cameras.

Data from test series scheduled to be collected from 7/21/2021 to 10/3/2021.

No existing will be used for this test series.

Aircraft seat manufactures and test laboratories.

Data from the test series could be utilized to determine future requirements for certification testing that utilize ATDs. Public use would provide a historical record of ATD dynamic response evaluation and datasets.

Data will be made publicly available.

NHTSA, <https://www-nrd.nhtsa.dot.gov/database/veh/>

A quarterly plan review will be conducted while the project is active. Once the test series and the project is complete, a full review will be conducted to ensure all data and external references are correct, all data accessible and the DMP outline is met.

2. Standards Employed:

Sensor output data will be published as ascii text. High speed video will be available in MP4 format. Still photos published as JPEG. Photometric data available as ascii text. Not using proprietary data formats.

Not using proprietary data formats.

Data's file formats are standard formats.

The file formats used are standard to our field.

The database ensures that all fields are properly defined and provides space for the test conditions to be defined.

The current metadata schema plan will follow a generic Metadata Object Description Schema (MODS). Likely to change based on future guidance or updated best practices.

The data are managed by the Federal Aviation Administration, are in the public domain, and may be re-used without restriction.

Necessary software tools: The file formats will include: .txt files, .csv, .jpeg, .mp4. The .txt and .csv file formats can be open with any text editor, such as Microsoft note pad. A free text editor available from Microsoft is Basic Text Editor. The .jpeg files can be viewed with Microsoft Photos, and a free version of One Photo Viewer is available.

Once the data is published, all quality control measures will be at the direction and guidance from the Transport Research Board.

3. Access Policies:

The data are managed by the Federal Aviation Administration, are in the public domain, and may be re-used without restriction.

Not applicable.

Data collected from this research provides no privacy, ethical, or confidentiality concerns due to data sharing.

No human subjects and/or personal information will be utilized in this research project. No requirements for deidentifying subjects prior to sharing data. No restrictions will be placed on data access.

4. Re-Use, Redistribution, and Derivative Products Policies:

The data are managed by the Federal Aviation Administration, are in the public domain, and may be re-used without restriction.

Link will be updated once the link is assigned.

No intellectual property rights apply to this data set.

No copyrights apply to this data set.

No rights will be required to be transferred to the data archive.

The data are in the public domain, may be re-used without restriction, and will not be licensed.

5. Archiving and Preservation Plans:

This data set will be archived at the NHSTA database. Prior to archiving the data set will be stored on the CAMI server which is backed up daily.

URLs will be updated once assigned links.

The data is expected to be submitted to the archive within six (6) months of completion of data collection.

The data will be stored on a Federal Aviation Administration server until data is archived.

The FAA-CAMI server which is backed up daily.

Computer security prior to transfer will be accomplished by FAA and the MyIT Service Center. Data will be transferred from a MyIT Service Center controlled computer.

Archive location of data is directed by FAA and AVS guidance.

This dataset will be retained in perpetuity.

Yes, persistent identifiers linked to the data are employed by the archive.

Archive location of data is directed by FAA and AVS guidance.

6. Policies Affecting this Data Management Plan:

This data management plan was created to meet the requirements enumerated in the U.S. Department of Transportation's "Plan to Increase Public Access to the Results of Federally-Funded Scientific Research" Version 1.1 << <https://doi.org/10.21949/1520559> >> and guidelines suggested by the DOT Public Access website << <https://doi.org/10.21949/1503647> >>, in effect and current as of July 30, 2021.

Planned Research Outputs

Dataset - "FAA Modernization of ATD Apparel"

This info is addressed in the plan. We need a way to easily bring it forward

Data paper - "TBD"

This paper will summarize the tests conducted, summarize findings, and draw conclusions.

Planned research output details

Title	Type	Anticipated release date	Initial access level	Intended repository(ies)	Anticipated file size	License	Metadata standard(s)	May contain sensitive data?	May contain PII?
FAA Modernization of ATD Apparel	Dataset	2023-12-31	Open	None specified	2 GB	Creative Commons Attribution 4.0 International	None specified	No	No
TBD	Data paper	2022-01-02	Open	ROSA P	20 MB	Creative Commons Attribution 4.0 International	None specified	No	No