TRANSPORTATION SECURITY & EXPLOSIVES CHARACTERIZATION

MOBILE APPLICATION FOR LUGGAGE SELF-SCREENING

MOBILE APPLICATION TO PRE-SCREEN PASSENGER LUGGAGE FOR SECURITY COMPLIANCE.

The Transportation Security Administration (TSA) publishes a list of items that are prohibited in passenger baggage and enforces passenger compliance at screening checkpoints before departure. For various reasons, including language barriers and disabilities, passengers often include prohibited items, which results in further screening. Additional screening slows down the checkpoint process, leads to passenger delays, and requires more security and airline personnel to manage the disruptions.

Researchers at the Transportation Security Laboratory invented the Mobile Application for Luggage Self-Screening (MALSS) to address these challenges by providing passengers with a baggage pre-screening tool. Passengers can download MALSS to their mobile devices and take photographs within the application (app) to assess their luggage as they pack. The MALSS app enables users to determine which items are not allowed according to the TSA prohibited items list, ensuring an efficient and quick on-site screening experience.

KEY BENEFITS

+ Increases screening capacity and efficiency

+ Enhances passenger experience

+ Reduces communication barriers that may hinder compliance

STAGE OF DEVELOPMENT
Proof of Concept

PARTNERSHIP SOUGHT
License

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DHS COMPONENT
Science & Technology Directorate

The Technology Transfer and Commercialization Branch (T2C) within the Office of Industry Partnerships (OIP) of the Department of Homeland Security (DHS) Science and Technology Directorate (S&T) serves as the centralized point to manage technology transfer activities throughout DHS and the DHS laboratory network. **T2C@hq.dhs.gov**

THE TECHNOLOGY

The proposed app analyzes collected images from the user's mobile device against a list of known prohibited items. App developers can program the tool to label prohibited items based on 2D or 3D images, enhancing the user experience. Prohibited items are flagged with a red box and details informing the user why it was flagged and how to manage the item. The app can also prompt users to input flight information and display airline-specific luggage information to confirm whether the user's luggage meets the size allowance.

The app-based prescreening process is not limited to air travel scenarios. Applications for the tool include trains, cruises, parcel shipping services, stadiums, and event venues. Other uses include packing checklists for military, hunting, or critical trips that require specific and necessary items.
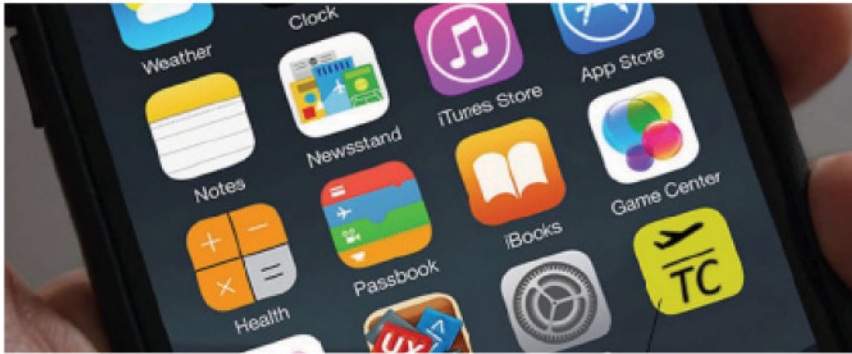
The MALSS tool could be offered through an accessible mobile application that users can download and operate on their personal devices.

Using the MALSS app, a user takes a photo of their luggage and packed items. The app flags prohibited item(s) in the photo and makes recommendations on how to address before arriving at the screening checkpoint.

APPLICATIONS

The technology has several potential end users:

+ Passenger prohibited item screening

+ Parcel post prohibited item screening

+ Item checklist compliance screening

PATENT INFORMATION

US Patent application number 18/609,209

CONTACT INFORMATION

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TECHNOLOGY SOLUTION

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