User Guide for
ACRP WebResource 2:
Airport Passenger Terminal Design Library

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Search for Documents

The home page is shown in Figure 1. The red boxes in the figure highlight where you can initiate a search from the home page: from the search box in the top right-hand corner of the home page, and from the Search Now button at the bottom of the page. Clicking on the Search Now button takes you to the search results page shown in Figure 2.

Figure 1: Home Page for Airport Passenger Terminal Design Library.
View Search Results

The search results are presented as a list of documents (see Figure 2). For each document found, (1) an image of the document, (2) the title of the document, and (3) a few lines of text about the content of the document (usually from the document abstract) are presented. These three pieces of information are provided to assist you in deciding which documents you want to open and review further.

Figure 2: Screen Capture of Search Results.
Filter Search Results

Search results can be filtered by the type of document—ACRP Publications, Books, Journals, and Other Documents—and by the publication date. In Figure 3, the respective filters are shown under “Categories” and “Date Range” in the red box.

Figure 3: Ways to Filter Search Results.
View Document Abstract

You can view the document abstract, creator, date of publication, and other information by clicking the image title on the search results page (example highlighted in Figure 4). When you click on a title, the abstract page is displayed (Figure 5).
View Document

The View and Download buttons provide two ways to open a document from the abstract page (see Figure 6). Clicking on the View button will open the document in a separate browser tab (Figure 7). Clicking on the Download button will download the document to your device (Figure 8).

Figure 6: Library Document Page.

Figure 7: Document in Separate Browser Tab.
Figure 8: Download Document to Device.
Obtaining Copyright-Restricted Documents

ACRP does not have copyright permission to include the full text of some documents that are referenced in the library. For such documents, a one-page summary (an example is shown in Figures 9 and 10) is provided in the library in place of the copyright-restricted document. The one-page summary provides enough information to allow you to request or purchase a copy of the publication as needed.

Figure 9: Example Summary Page for Copyright-Restricted Documents.
1. Agent-based modelling and analysis of security and efficiency in airport terminals

Janssen, Stef (1); Sharpanstkykh, Alexei (1); Curran, Richard (1)

Source: Transportation Research Part C: Emerging Technologies, v 100, p 142-160, March 2019; ISSN: 0968090X;
DOI: 10.1016/j.trc.2019.01.012; Publisher: Elsevier Ltd

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Abstract: Both security and efficiency are important performance areas of air transport systems. Several methods have been proposed to assess security risks and estimate efficiency independently, but only few of these methods identify relationships between security risks and efficiency performance indicators. To analyze security, efficiency, and the relationships between them, an agent-based methodology was proposed in this work. This methodology combines an agent-based security risk assessment approach with agent-based efficiency estimation. The methodology was applied to a case study that analyzes security regarding an Improvised Explosive Device (IED) attack, different commonly used efficiency performance indicators in the aviation domain, such as queuing time for passengers, and the relationships between them. Results showed that reducing security risks and improving efficiency were not always conflicting objectives. Reducing the number of passengers before the security checkpoint was found to be an effective measure to reduce security risks and improve efficiency aspects. Furthermore, results showed that airports should attempt to spread passengers across the available space as much as possible to reduce the impact of an IED attack. © 2019 Elsevier Ltd (61 refs)

Main heading: Airport security

Controlled terms: Airport buildings - Autonomous agents - Benchmarking - Computational methods - Efficiency - Explosives - Risk assessment - Risk management - Risk perception - Simulation platform

Uncontrolled terms: Agent-based methodologies - Agent-based modelling - Airport terminals - Conflicting objectives - Improvised explosive devices - Performance indicators - Security risk assessments - Security risk managements

Classification Code: 402.2 Public Buildings - 913.1 Production Engineering - 914.1 Accidents and Accident Prevention - 971 Social Sciences

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Database: Compendex

Compilation and indexing terms, Copyright 2020 Elsevier Inc.

Data Provider: Engineering Village

Figure 10: Example Summary Page for Copyright-Restricted Documents.

Navigate the WebResource Template

The header and footer stay constant as you navigate through this WebResource. Figure 11 shows the WebResource 2 header. The white bar at the top (showing About ACRP, ACRP Events, etc.) provides links to ACRP content on the main TRB website. The rest of the header provides the project title, menu bar, and search box. The footer (Figure 12) contains links to ACRP Oversight Committee, TRB Executive Committee, and Websites of ACRP’s parent organizations: TRB and the National Academies of Sciences, Engineering, and Medicine.

Figure 11: Header of Airport Passenger Terminal Design Library.

Figure 12: Footer of Airport Passenger Terminal Design Library.