AVSIAGA APPLICATION PLAN FOR IMPROVEMENT AWARENESS ITEMS CARRIED OUT BY AIRLINE PASSENGERS YOGYAKARTA INTERNATIONAL AIRPORT

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ABSTRACT
The increase in the number of passengers at Yogyakarta International Airport has caused a spike in traffic resulting in long queues at the airport inspection room. However, awareness of the importance of security and the need for stricter supervision of luggage is still a major concern. This study aims to design an application Aviation Security SIAGA (AVSIAGA) is a facility that can help Aircraft passengers to increase passenger awareness about the importance of the security of their luggage and assist AVSEC officers in the process of monitoring and identifying potential security threats. This research uses the method Prototype, with procedures using survey methods, interviews, and data analysis to understand the needs and perspectives of application users. The result of this research is AVSIAGA based application web Information and security technology is expected to increase passenger awareness about the safety of their luggage and help create a safer environment at Yogyakarta International Airport.

Keyword *: Airport Access, Passenger luggage, Web-based applications, Passenger, Information Systems*

1. INTRODUCTION

One of the duties of airports is to provide airport services that guarantee safety, order, comfort, efficiency and economical services for the operation of flights and other related businesses.

Security is a fundamental factor that must be met by an airport. As stated in *Annex 17* from the Chicago Convention (1994) and *Annex* other matters related to Aviation Security, that each ICAO member country must establish an Aviation Security Program, for this reason the Indonesian government through the Ministry of Transportation established PM 80 of 2017 concerning the National Aviation Security Program, replacing PM 127 of 2015 (KEMENHUB, 2017), and established SKEP 2765 of 2010 concerning (Procedures for Security Checks of Passengers, Aircraft Personnel and Luggage Transported by Airplanes and Individuals).

Airport security not only prevents unlawful actions, but airport security officers must be responsive to potential threats to aviation security and safety, such as bomb threats and the escape of dangerous goods, as well as prohibited items, which will be carried by aircraft, the entry of officers or people who do not use PAS in the Limited Security District (*Security Restricted Area*) and sterile areas (Dian Novita, 2020).

This security includes preventing dangerous goods from entering the aircraft. To increase awareness about dangerous luggage, comprehensive efforts need to be made. One of them is by increasing awareness of luggage through the application.

1.1. Method

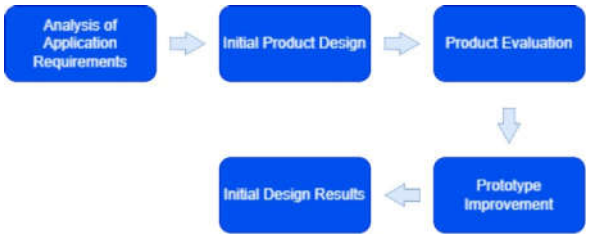


Figure 1 Stages in the prototype method

This research uses the method *Prototype*, with procedures using survey methods, interviews and data analysis to understand the needs and perspectives of application users. The result of this research is an AVSIAGA-based application *web* with information and security technology, it is hoped that it can increase passenger awareness about the security of their luggage and help create a safer environment at Yogyakarta International Airport..

1.1.1. Application Requirements Analysis

In this section, several application needs analyzes related to AVSIAGA-based information systems will be explained *web*.
(1) Research design from January 2023 to February 2023, located at Yogyakarta International Airport. This research was carried out from March 2023 to July 2023

(2) The population in this study was all passengers at Yogyakarta International Airport before checking at PSCP with a daily number of passengers reaching 5277

This sample is a small part of the population that has been determined so that it can be used to represent the population. In obtaining samples, researchers used the Slovin formula as follows :

$$n = \frac{N}{1 + Ne^2}$$

(3) Observations need to be carried out carefully and carefully because these observations aim to describe the activities or activities taking place, the people involved and the perspective of the events being observed.

A questionnaire here is a questionnaire made in the form of questions or statements to be distributed to respondents. In this study, a questionnaire was used which was based on Likert scale parameters.

An interview is a type offace-to-face communication between two or more people. One party conducts an interview, and the other party conducts an interview with a specific purpose (Fadhallah, 2020);

(4) Testing or testing is carried out when the designed system forms a unified whole and can be used. The system being built needs to be tested to determine the margin of error level before being used by users. This testing can be carried out by researchers or users.

System Evaluation This stage is the application evaluation stage carried out by researchers and user to find out whether the application is appropriate or not, if appropriate it will be implemented immediately.

User Case Diagram At this stage the system has been tested and evaluated first.

2. RESULTS AND DISCUSSION

Respondent Characteristics

The need for the AVSIAGA application is by distributing a survey to 374 respondents based on the questionnaire that has been distributed by the researcher and filled in by the respondents, the characteristics ofthe respondents based on gender and age can be explained as follows:

Table 2 Age characteristics of respondents

Gender	Amount	Present
Man	175	46,8%
Woman	199	53,2%
Total	374	100%

Table 2.1 distribution of respondents based on age

Age	Amount	Present
12-18 Years	46	12,3%
19-25 Years	161	24%
26-35 Years	72	19,3%
36-45 Years	58	15,5%
46-55 Years	37	9,9%
Total	374	100%

Results *survey* showing :

Based on the results *survey* which has been carried out by researchers, it was found that 374 respondents agreed with the existence of a web-based application to replace the videos broadcast on Passenger On Ticketing System.

Building Design

Exploring what needs are desired by the user, design will be carried out or what is usually called *design*. Creating a software design is useful for describing the design before coding the program.

3. FIGURES AND TABLES

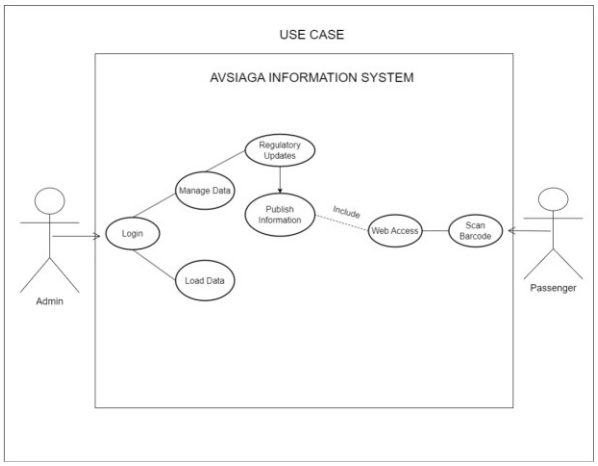


Figure 3 Design Use Case AVSIAGA Information System

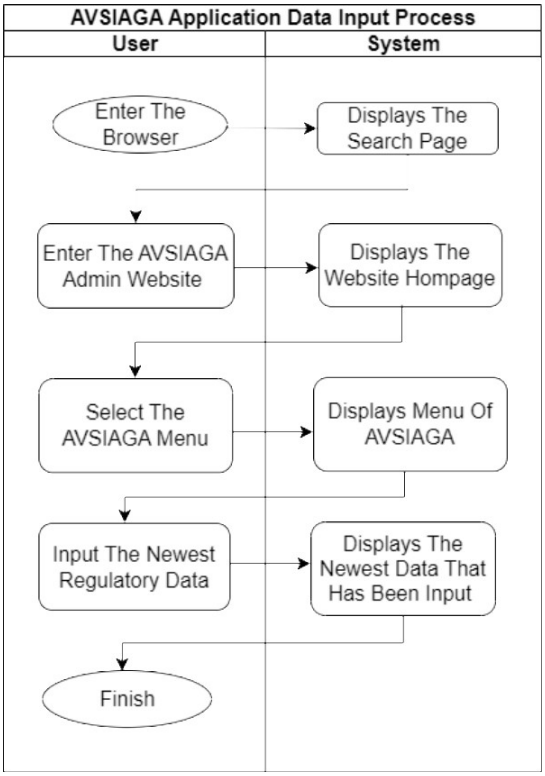


Figure 3.1 AVSIAGA Activity Diagram Design.

4. CODING THE SYSTEM

a. User Interface Admin

1. Login Page Admin

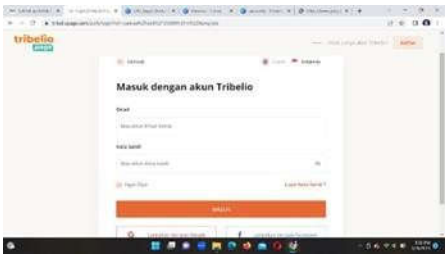


Figure 4 User Interface Login Page Admin

2. Page Builder

Figure 4.1 Page Builder

3. Passenger User Interface

Figur 4.2 View On Passenger

5. DESIGN EVALUATION

User evaluation of Prototype, this testing is carried out based on the results of test evaluations in the user environment Mobile Phone, PC Desktop and Expert Validation to find out whether the application created has weaknesses or not.

Table 5 Occupation and Expertise of sources

No.	Name	Occupation	Expertise
1.	Mr. Jhoni S.IT	Head of the informatics unit	System, Informatics and Network Manager
2.	Mr. Ponco Achmad	YIA Airport AVSEC	Senior Leader AVSEC Screening

In this testing, resource persons provided suggestions and opinions for future system development. The results of expert validation can be seen in the following table:

Table 5.1 Opinions and suggestion of resource persons 1

No.	Indicator	Opinion	Suggestion
1.	Screen Display	"The display is good"	"The color chosen must be light and not too dark"
2.	Ease of running the web	"The application is easy to access"	"Please note that access speed depends on internet speed"
3.	Information presentation display	"Already Good"	"The slide was made to make it easier for passengers later"

Table 5.2 Opinions and suggestion of resource persons 2

No.	Indicator	Opinion	Suggestion
1.	Screen Display	"The view is Good"	"Need to add some items"
2.	Ease of running the web	"There are also those that comply with PM 211 of 2020"	"Other regulations need to be addes in accordance with aviation regulations"
3.	Information presentation display	"According to the facts on the ground"	"Already well"

6. PRODUCT IMPROVEMENT

This author's improvements are based on criticism and suggestions from expert validators regarding the AVSIAGA information system media.

Table 6 Revision Results provided

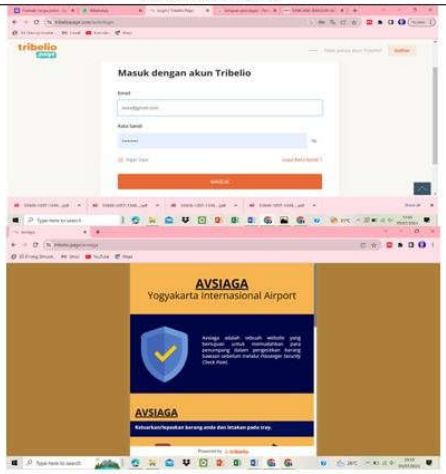
No.	Revision	Before	After
1.	Added domestic LAG and International LAG features	There isn't any	It's on the Dangerous GOOD page
2.	Rules page made shorter	Yes, but in written form	It becomes simpler by adding images
3.	Attention sentence	"Remove and place your item into the tray "	"Items attached to the body and electronic devices are put into the tray"

7. FINAL PRODUCT VIEW

1. Access to addresses website

Table 7 Testing access to addresses website

TEST FACTOR	SUCCESS		INFO
	YES	NO	
Access Process To https://tribelio.page/avsiaga.	✓		Succeed
SCREENSHOT			



2. User Interface

Table 7.2 User Interface

TEST FACTOR	SUCCESS		INFO
	YES	NO	
The access process uses desktop PC and MobilePhone	✓		Succeed
SCREENSHOT			
1. *MobilePhone* 			
2. *Desktop PC* 			

3. Access Application Link with QR

Table 7.3 Access using QR code

TEST FACTOR	SUCCESS		INFO
	YES	NO	
The AVSIAGA access Process uses QR	✓		The Website display can be accessed using QR
SCREENSHOT			
1. *QR* 			
2. Web view 			

DISCUSSION

1. Evaluate testing on users Mobile Phone and PC Desktop, testing is carried out to ensure that the application can run well and responsively on these two platforms. This is necessary because AVSIAGA application users can use various devices, both Mobile Phone nor PC Desktop. Evaluation results from testing on these two environments will provide information about application performance and problems that may arise on each platform.

2. Expert Validation web, Member use web Application validation aims to ensure that the application complies with standards and best practices in development web. Member web will evaluate aspects such as security, speed, compatibility, etc user experience from the application.

3. Content validation, The testing process aims to check the correctness and completeness of the information presented in the application. This validation is important to ensure that the data displayed by the AVSIAGA application is accurate, relevant and can be relied on by users.

4. Opinions and suggestions from validators are invaluable in identifying potential improvements and improvements to the application. Input from potential users can help identify problems or errors that may have been overlooked during application development. Additionally, suggestions from content validators can also help improve user experience and the overall quality of the application.

CLOSING

Conclusion

Of the five stages that have been passed through, the AVSIAGA Information System Design is a new system created to make it easier for passengers *awareness* When carrying your luggage before entering the Yogyakarta International Airport PSCP inspection room, it is hoped that the AVSIAGA application can be implemented at Yogyakarta International Airport, a code will be provided *QR* in several places the terminal is directly connected to *web*. With this system, it is hoped that no more passenger luggage will be left behind or confiscated by AVSEC officers.

Suggestion

Further development is needed so that the AVSIAGA information system becomes better suited to needs and adapts to increasingly developing technology such as

1. The addition of the latest prohibition features is in accordance with the latest regulations regarding the National Aviation Security Program, specifically dangerous goods.

2. Added features for Passengers Vulnerable people. To make it easier for those traveling without a companion.

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