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Testing Design Value of CC with Reflective SEM Line Application Data Resistance Design Medical Safety Reserve in Airport Abdul Rachman Saleh Malang, Indonesia

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ABSTRACT

In-flight safety services are currently a top priority that cannot be separated from in-flight service components. Each airline has in-flight safety services, to provide services in accordance with Aviation Safety Law Regulations. Management of aviation safety management services ranging from information submitted to airline users with accurate and accountable information on the truth of the data provided. The purpose of this study is to provide an overview Web-based application design data passenger medical record of in-flight safety services using ID Hostinger. Medical record data that is known by the public is only located in the hospital and is the patient's medical record data that is vital in the management of medical record data as a whole. An in-flight safety service includes: 1) providing passenger medical record information when departing and departing according to the intended flight destination. 2) Provide ease of passenger data to the airlines used, to provide in-flight safety services with medical record data of passenger data to obtain. The health service is in accordance with the intended Hospital and in accordance with the condition of the last complaint of the passenger. 3) Provide ease of passengers to claim health insurance in case of an accident with medical record data that has been integrated with the intended hospital. 4) Provide insurance claim information to the airlines in accordance with the medical record data and the intended hospital passengers. So it can be in the number of insurance claims that will be issued by the airlines in the event of an accident. The limitations of the problem in this study only describe how the in-flight safety service system uses airline passenger medical record data. By using airplane ticket purchasing system at each of the designated airline ticket counter and in cooperation with related Hospital and insurance party to claim medical expenses in accordance with the diagnosis of passenger medical record and patient's medical history at the time of input by medical record officer in each counter integrated with the Hospital and passenger insurance. Web-based application prototype of the in-flight safety medical record data is run on the Server ID Hosting server.

Key Words: *Medical record, Design, Information system, ID hosting.*

1. INTRODUCTION

The SOP (Standard Operational Procedure) with reference to Indonesia's international security standards has ratified Law No. 1 of 2009 concerning aviation and implementing regulations to ensure compliance with ICAO standards and national and international standards. The Directorate General of Civil Aviation oversees the management of aviation safety, the Minister of Transportation Regulation concerning the national aviation safety program The National Aviation Safety Program as referred to in Article 1, must be a guideline and reference for aviation service providers in developing a Safety Management System in the environment work of flight service providers. 3) Passenger safety in accordance with the standard of security in flight using security equipment

consisting of emergency exhaust gate and the use of oxygen in the aircraft. All three components are in-flight safety services in accordance with aviation security standards in Aviation Regulations (1).

Passenger data service which is currently only limited to plane ticket booking in accordance with destination flight route and go home, can not show data of passenger medical record integrated with hospital and insurance in accordance with passenger medical record data including passenger complaint data, hospital objectives and passenger insurance(2) that will help passengers who experience a decline in their physical health conditions get handling quickly and efficiently in accordance with the destination depart and destination home in accordance with the destination city, and integrated with the Hospital that already has a web application data integrated with the medical record of the airline the flight at the time of the first purchase of a plane ticket that corresponds to the airline destined for the ticket or the sale of the airline ticket is a medical record officer who records the passenger after purchasing the airfare. The passenger medical record data is stored in the server ID Hostinger database using the PHP MySQL database engine in accordance with the data structure table created in accordance with the flight record information system of in-flight safety services.

By using three Garuda Indonesia airlines, Citilink and Lion Air medical record data system for in-flight safety services can be used by passengers to seek treatment at the intended hospital without having to register to the intended hospital by using the data web medical record system of passenger data in SOP flights (Standard Operating Procedure) with reference to international safety standards, which include; the feasibility of a flight letter or flight route in accordance with the period of MOU (Memo of Understanding) implementation with the Ministry of Transportation or the government, the operational feasibility of the airline's financial management in accordance with the annual tax payment, aircraft eligibility from the airline and aircraft feasibility test once every three months according to the distance and the flight route, the feasibility of human resources (HR) that operates and aircraft systems in airlines. 3) Passenger safety in accordance with the standard of security in flight using security equipment consisting of emergency exhaust gate and the use of oxygen in the aircraft. All three components are in-flight safety services in accordance with aviation security standards in Aviation Regulations. Passenger data service which is currently only limited to plane ticket booking in accordance with destination flight route and go home, can not show data of passenger medical record integrated with hospital and insurance in accordance with passenger medical record(4) data including passenger complaint data, hospital objectives and passenger insurance that will help passengers who experience a decline in their physical health conditions get handling quickly and efficiently (9) in accordance with the destination depart and destination home in accordance with the destination city, and integrated with the Hospital that already has a web application data integrated with the medical record of the airline the flight at the time of the first purchase of a plane ticket corresponding to the airline destined for the ticketing or the sale of the airline ticket is a medical record officer who records the passenger after purchasing the airfare(5). The passenger medical record data is stored in the server ID Hostinger database using the PHP mySql database engine in accordance with the data structure table created in accordance with the flight record information system of in-flight safety services. By using three Garuda Indonesia airlines, Citilink and Lion Air medical record data system of in-flight safety services can be used passengers to seek treatment at the hospital without having to register first to the House(6).

Design of Cmaptool System Service Safety passengers medical record data Air transport [figure 1), beginning with passenger data first registering by registering passenger data to the airline used both arrival and departure, by inputting the passenger data using https://rekamedistransportasiudara.890m.com/layanan/loginuser.php, registered passenger data information will go to database hosting Id Hostinger hosting as imlplementasi server clinic abd abdurachman saleh airport malang unfortunate. With passenger medical record data services which include: [1].hospital, [2] .Transportation,[3]. Medical equipment, [4].Clinic airport destination. In accordance with the medical record data service is then sent to the airline server destined either Citilink or Lion air, the information is characterized in accordance with the medical record data service from the airport clinic. Lion Air and Citilink airline servers have an information reporting menu that includes: [1]. Insurance, [2]. Passenger data, [3]. Medical data of

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passengers medical record data information can be known by passengers who have already registered to URL: http://rekamedistransportasiudara.890m.com/layanan/loginuser.php, medical record data from all three servers will be tested by using cc test method (Clomatic complexity by using Graph matrix diagram by using good and stable structured procedure type with cc value 5-10 and 20% probability improvement rate.The result of CC value is related to outer load factor method with SEM PLS of endogenous and exogenous variables.

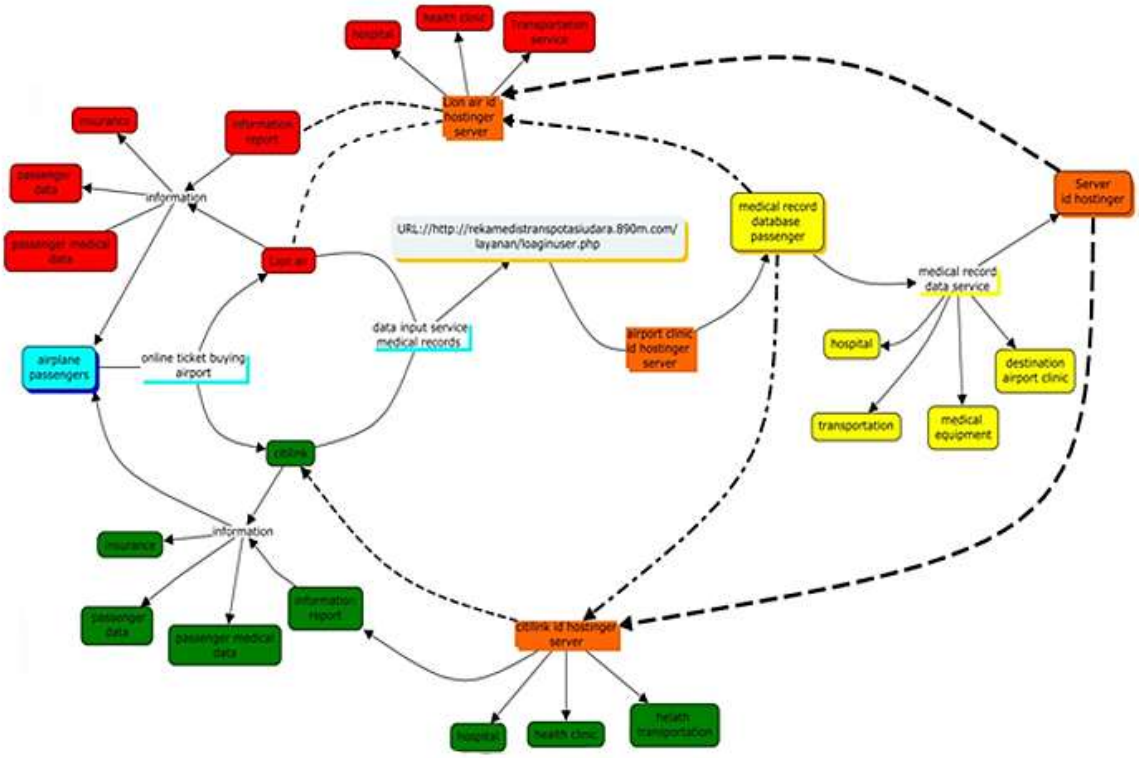

Figure 1. Design Cmaptool system service safety passengers for medical data record of air transport

2. METHODS

The picture above specifies 2.1. The source data or terminator with the Aircraft Passenger Ticket Information data has two source data including: [1]. Lion air, [2]. Citilink with the process of SIM information system medical record data Passenger data service with output divided into three output sections which include: [1]. Terminator data destination to Server Id Hostinger Clinic Airport, Process system running in the form of output database RM lion Air and Citilink to Terminator destination data Server Id Hostinger Clinic Airport. With data destination data service RM in SIM Passenger data service [2]. Source Server Id Hostinger as the next output of the source (storage data) method which has a function as an information method that can be changed or re-verified into the process 1.2 Lion Air which has three supporting outputs of source system: [1]. RS, [2]. Health Clinic, [3]. Transportation The service from the source system is then processed 1.3 The information report generates the mirror method into the 1.4 Information process resulting in three output source support ouput: [1]. Data store, [2]. Supporting medical data, [3]. Passenger data to the three sources of information systems are stored in the server Id hostinger airport clinic with the system method save without any ferification of information data changes. [3]. Source Server Id Hostinger as the next output of the source (storage data) method which has a function as an information method that can be changed or re-verified into a 3.1 Citilink process that has three outputs to the source system: [1]. RS, [2]. Health Clinic, [3]. Transportation The service from the source system is then processed 3.2 The information report produces the mirrored method into the 3.2 Information process resulting in three ouput supporting source systems: [1]. Data store, [2]. Supporting medical data, [3]. Passenger data to the three sources of information systems are stored in the server Id hostinger airport clinic with the system method save without any ferification of information

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data changes. the medical record data from the three servers will be tested using the cc test method (Clomatic complexity using matrix Graph diagram using a good and stable structured procedure type with a cc value of 5-10 and a 20% probability improvement rate.The result of cc value is related to the method outer load factor with SEM PLS of endogenous and exogenous variables.

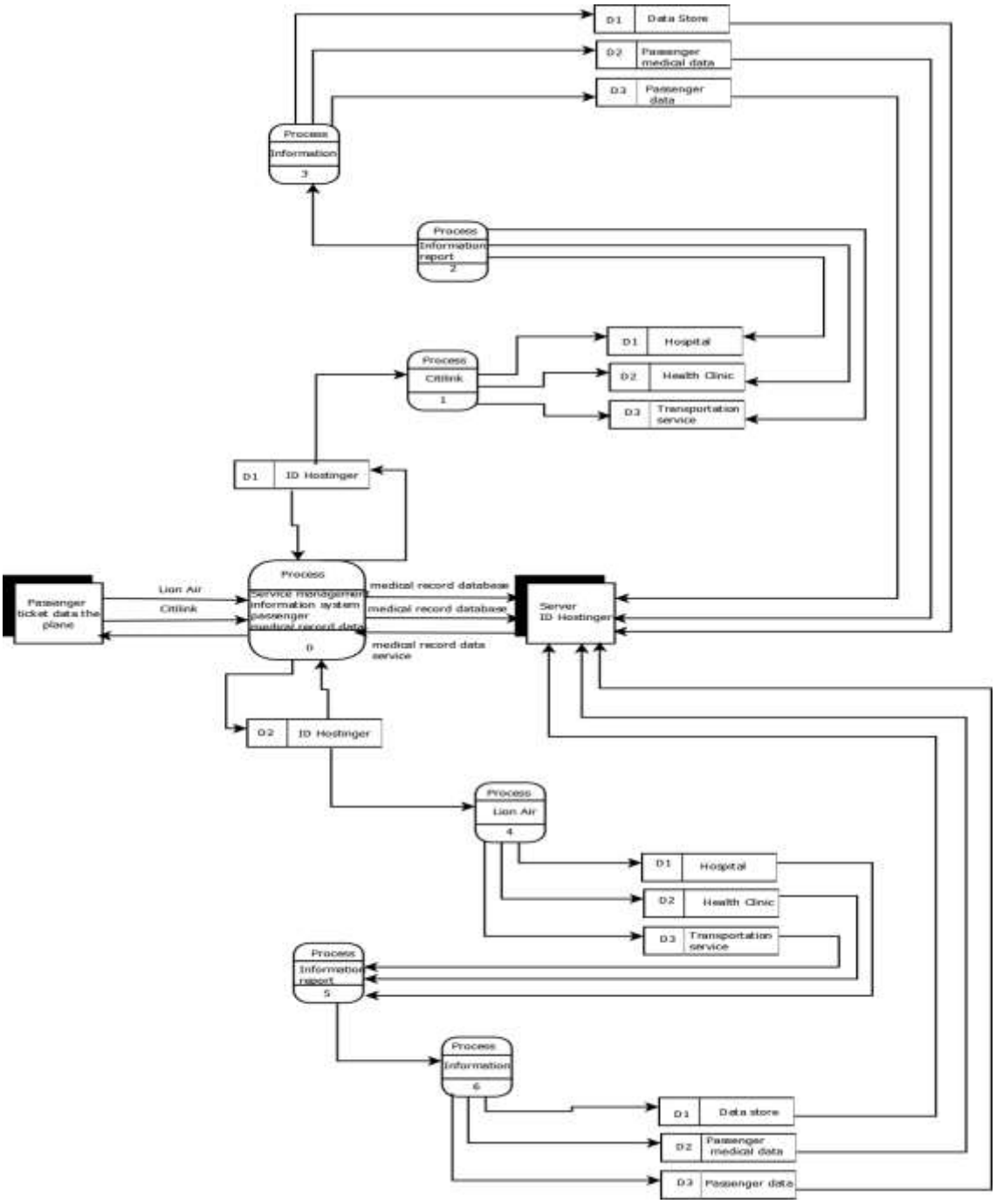

Figure 2. The DFD Application of Aviation medical record data service

3. RESULTS AND DISCUSSION

This stage aims to know the results of CC test by using [1]. Flow data flow procedure, [2]. Graph matrix, [3]. Node weight relationship, from the test results can be known the value of CC and Probability of system improvements to be performed respectively Flowgrap Flow system system Aviation medical record data. The result of matrix graph and table weight relationship as follows:

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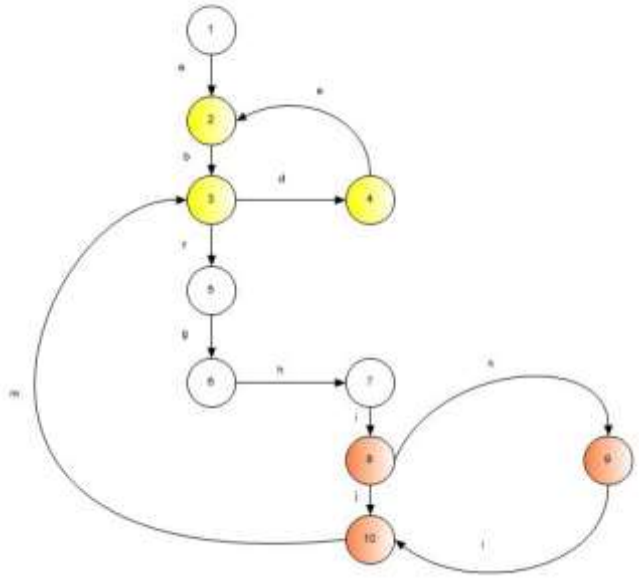

Figure 3. Flowmap for flow system matrix graph on airport clinic services

Figure 3 showed the Relationship Weight Flowgraph System Flow Service flight record medical record, node 1 connection to node 2 with node 'a' description of node relation 'if node relation', with value of '1' connection weight, node 2 connection to node 3 with the node 'b' description of node relation 'if there is a node relation', with the weight value of the '1' relationship, node 3 connecting to node 4 with the node 'c' description of the node relationship 'if there is a node' relationship, with the weighted value of the node '1', node 4 connection to node 5 with the node 'e' description of the node relation 'if there is a node connection', with the weight value of the '1' relationship, node 5 connection to node 6 with the node 'f' description of the node ' if there is a node relationship ', with the weight value of the' 1 'relationship, node 3 connection to node 7 with the node' g 'description of the node relation' if there is a node connection ', with the weighted value of' 1 ', node 7 connection to node 8 with the node 'g' description of node relation 'if there is a node relation', with the weight value of the '1' relationship, node 8 connection to node 9 with the node 'h' description of node relation 'if any node' relationship, the weight of the '1' relationship, node 9 connection to node 10 with the node 'k' description of the node relation 'if there is a node connection', with the weight value of the '1' relationship, node 10 connection to node 5 with the description of node 'L' node 'if there is a node relation', with the weight value of the '1' relationship, node 8 connection to node 11 with the node 'i' description of the node connection 'if there is a node relation', with the weight value of the '1' relationship, node 11 connection to node 7 with the node 'j' description of the node relation 'if there is a node relation', with the weight value of the '1' relationship, the result of the cc value obtained from the Flowgraph of the Airport Clinic Service Cluster, as follows:

Cyclomatic Complexity = 2-1 = 1, 2-1 = 1, 3-1 = 2, 3-1 = 2, 10-1 = 9, 10-1 = 9

= 24 + 1 = 25

Cyclomatic complexity =20/100 * 25 = 5

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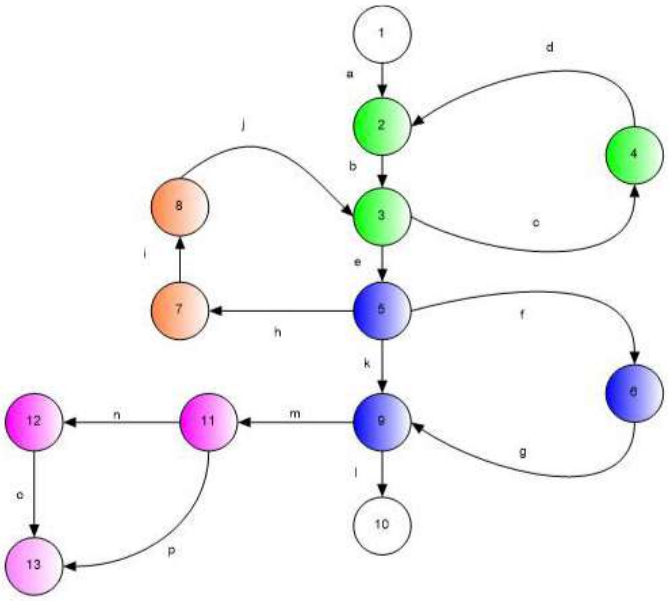

Figure 4. Flowmap Flow System Matrix Graph Lion Air Airlines Service

Figure 4 showed the values Relationship Weight Flowgraph System Flow Service flight record medical record, node 1 connection to node 2 with node 'a' description of node relation 'if node relation', with value of '1' connection weight, node 2 connection to node 3 with the node 'b' description of node relation 'if there is a node relation', with the weight value of the '1' relationship, node 3 connecting to node 4 with the node 'c' description of the node relationship 'if there is a node' relationship.

The weighted value of the node '1', node 4 connection to node 5 with the node 'e' description of the node relation 'if there is a node connection', with the weight value of the '1' relationship, node 5 connection to node 6 with the node 'f' description of the node ' if there is a node relationship ', with the weight value of the' 1 'relationship, node 3 connection to node 7 with the node' g 'description of the node relation' if there is a node connection ', with the weighted value of' 1 ', node 7 connection to node 8 with the node 'g' description of node relation 'if there is a node relation', with the weight value of the '1' relationship, node 8 connection to node 9 with the node 'h' description of node relation 'if there is a node' relationship.

The weight of the '1' relationship, node 9 connections to node 10 with the node 'k' description of the node relation 'if there is a node' relationship, with the weight value of the '1' relationship, node 10 connection to node 5 with the description of node 'L' node 'if there is a node relation', with the weight value of the '1' relationship, node 8 connection to node 11 with the node 'i' description of the node connection 'if there is a node relation', with the weight value of the '1' relationship, node 11 connection to node 7 with the node 'j' description of the node relation 'if there is a node' relationship, with the weight value of the '1' relationship, the cc value obtained from the Flowgraph of the Lion Air Service Flowgraph are as follows:

Cyclomatic Complexity = 2-1 = 1.2-1 = 1.3-1 = 2.3-1 = 2.9-1 = 8.9-1 = 8.13-1 = 12.13-1 = 12
= 46 + 1 = 47
Cyclomatic complexity = 40/100 * 47 = 18.8

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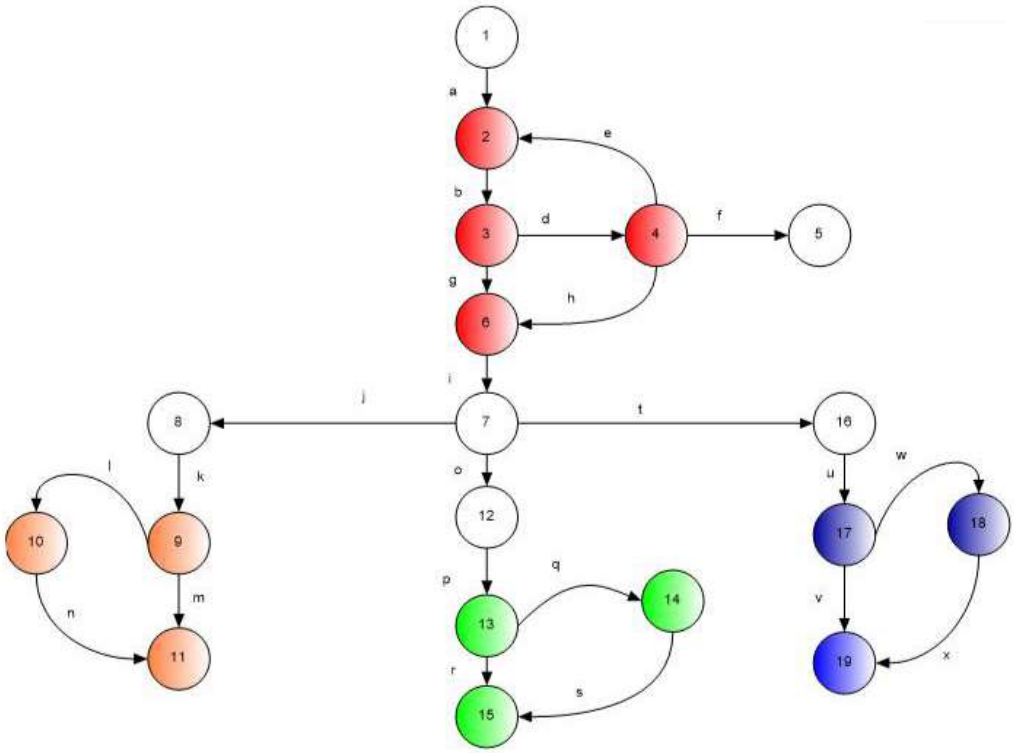

Figure 5. Flowmap of flow matrix flow graph application of passenger medical record data service

Results from figure 5 showed the values of Relationship Weight Flowgraph System Flow Service flight record medical record, node 1 connection to node 2 with node 'a' description of node relation 'if node relation', with value of '1' connection weight, node 2 connection to node 3 with the node 'b' description of node relation 'if there is a node relation', with the weight value of the '1' relationship, node 3 connecting to node 4 with the node 'c' description of the node relationship 'if there is a node' relationship, with the weighted value of the node '1', node 4 connection to node 5 with the node 'e' description of the node relation 'if there is a node connection', with the weight value of the '1' relationship, node 5 connection to node 6 with the node 'f' description of the node ' if there is a node relationship ', with the weight value of the' 1 'relationship, node 3 connection to node 7 with the node' g 'description of the node relation' if there is a node connection ', with the weighted value of' 1 ', node 7 connection to node 8 with the node 'g' description of node relation 'if there is a node relation', with the weight value of the '1' relationship, node 8 connection to node 9 with the node 'h' description of node relation 'if there is a node' relationship, the weight of the '1' relationship, node 9 connection to node 10 with the node 'k' description of the node relation 'if there is a node connection', with the weight value of the '1' relationship, node 10 connection to node 5 with the description of node 'L' node 'if there is a node relation', with the weight value of the '1' relationship, node 8 connection to node 11 with the node 'i' description of the node connection 'if there is a node relation', with the weight value of the '1' relationship, node 11 connection to node 7 with the node 'j' description of the node relation 'if there is a node' relationship, with the weight value of the '1' relationship, the cc value obtained from the Flowgraph System Service flow of the passenger medical record are as follows:

Cyclomatic Complexity = 2-1 = 1,2-1 = 1.6-1 = 5.6-1 = 5.11-1 = 10,11-1 = 10,15-1 = 14,15-1 = 14,19-1 = 18,19-1 = 18
=96 + 1 = 97

Cyclomatic complexity = 60/100 * 97 = 58.2

Results of CC and Probability Test of Improvement of Patient Registration of IGD in Wava Husada Hospital [1]. Flowmap Patient Registration The IGD results in a 21 cc score with a complex and critical type of procedure, a high system risk level, with a probability value of 20% improvement, a high recommended rate of improvement improvement. [2]. The Medical Check Unit

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Flowmap produces 9 cc values with well-tuned and stable procedural parameters, low system risk level, with a 5% probability repair rate, recommended risk level of easy repair, [3]. Flowmap Unit Billing produces 3 cc values with simple procedure type, low system risk level, with a probability value of 5% improvement, recommended risk level is easy. Total value of cc produced 33 cc with complex and critical procedure with high risk level, and probability value of improvement yielded 40% with recommendation of improvement of complex system. [1]. Flowmap Patient Registration The IGD results in a 21 cc score with a complex and critical type of procedure, a high system risk level, with a probability value of 20% improvement, a high recommended rate of improvement improvement. Being a system improvement process that must be done by using Improvement Model Reflective SEM test, to know the relationship of node relationship with the node and the probability value of system improvement to the node that is fixed with the reflective construct model of the drawing. 2.7. Construct testing of CC value and probability(7).

Table 1. Construct testing of CC value and probability Reflective Model Improvement

Flowmap	CC Value	Type of Procedure	Risk Level	Value Probability/100*CC	Level Risk Improvement
Clinic	25	Complex and critical procedure	High	20%	High
Airlines	40	Complex and critical procedure	High	40%	Complex
Application data RM	97	Vulnerable Procedure	Very High	60%	Very High

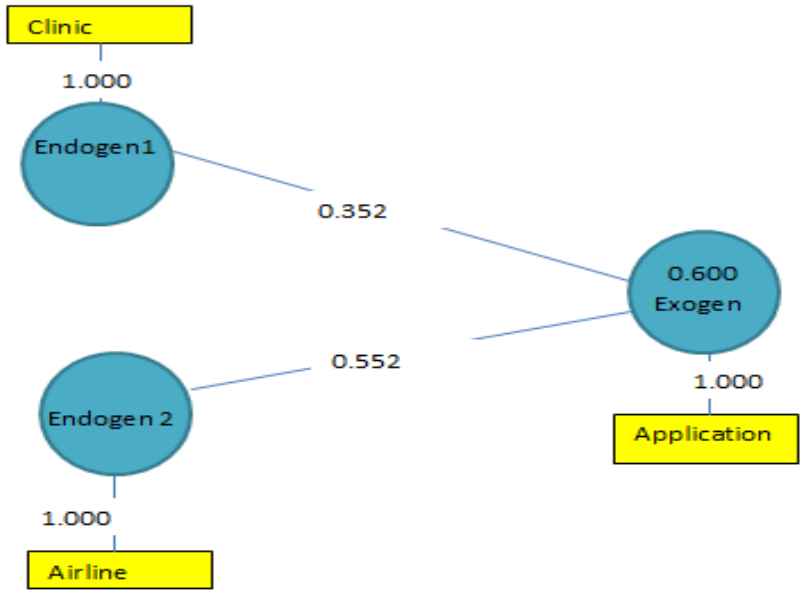

Figure 5. Construct testing of CC value and probability Reflective Model Improvement

Convergent validity of measurement model with reflexive indicator can be seen from correlation between score item / indicator with construct score. Individual indicators are considered reliable if they have a correlation value above 0.70. However, in the initial research, loading 0.50 to 0.60 is still acceptable. By looking at the output of correlation between the indicator with the construct as seen in output outer loading the table. From the above output shows that the correlation of the construct of the Airlines with the indicator is higher than the correlation of clinical indicator. This means that latent constructs predict indicators on their blocks better than other indicators(8).

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4. CONCLUSION

Web applications passenger medical record data of the aviation safety service can provide information directly to the airport clinic, with social disease data information integrated with airline servers. It can also assist the airport clinic in preparing the means of medical equipment required by both arrivals and departures passengers. It's service makes it easy to provide information on the circumstances or conditions of passengers on departure or arrival, for letters should not fly due to illness or be allowed to fly with special health services online. Suggestion from Simulation of computer network delivery of health information data in medical record unit by measuring response time method people who specialize in this field, such as System Manager, Network Administrator, Programmer, Communication Analysis and Data Center Manager (DBA). .Development of Product Services using the ERP System (Enterprise Resource Program). Because the application is not equipped with a security system, application development is required to make data more secure.

REFERENCES

1. FAA. FAR 23 Airworthiness Standards : Normal , Utility , Acrobatic and Commuter Category Airplanes (Updated to Amendement 55).

2. Durbin DR, Kallan M, Elliott M, Cornejo RA, Arbogast KB, Winston FK. (2003). Risk of injury to restrained children from passenger air bags. Traffic Inj Prev. 4(1), pp. 58-63. doi:10.1080/15389580309853

3. Marks RG. Validating electronic source data in clinical trials. (2004). Control Clin Trials. 25(5), pp. 437-446. doi:10.1016/j.cct.2004.07.001

4. Delegal MK, Pittman AP. (2014). Florida No-Fault Insurance Reform : A Step in the Right Direction. 29(3).

5. Brander JA, Zhang A. (1990). Market Conduct in the Airline Industry: An Empirical Investigation. Source RAND J Econ J Econ. 21(4), pp. 567-583. doi:10.2307/2555469

6. Tversky A, Denton S, Tennessee-tombigbee C, Sasser S, Klingaman D, Ochs J. (1985). The Psychology of Sunk Cost: ARKES. pp. 124-140. doi:10.1016/0749-5978(85)90049-4

7. Messerschmitt DG. (1987). Static Scheduling of Synchronous Data Flow Programs for Digital Signal Processing Edward Ashford Lee. IEEE Trans Comput. C-36(1), pp. 24-35. doi:10.1109/TC.1987.5009446

8. Trisnanto PY, Djuwadi G, Mulyadi A. (2017). Kode Diagnosa Dan Tindakan Diseases and Procedure of Eye and Adnexa Dengan Metode Normalisasi Data Pada Hasil Evaluasi Rcaf (Relative Complexity Adjustment Factor). (77): pp. 790-798.

9. Teknologi J, Hussain A, Mkpojiogu EOC. (2015). An Application of the Iso/Iec 25010 Standard in the Quality-in-Use Assessment of an Online Health Awareness System 1.0 Introduction. 77(5):2180-3722. doi:10.11113/jt.v77.6107

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