

Development of the Royal Thai Army equipment management System

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Abstract

This research aims to design the Royal Thai Army equipment system. Used in defense of many types and types, including procurement, procurement from abroad and inventing, producing, using it within the country. The data is stored in the program. This makes it difficult to link large amounts of information. and make it difficult to control Make it necessary to control the armament of the Army as a category. For easy search and control to prevent the loss of weapons and ammunition Therefore, the program for the control of the Royal Thai Armed Forces information was created. to be proportional Can be linked by running tasks in multiple departments. It also uses design principles in the form of WEB Application by using the MYSQL program to store the database from the above problems make the project organizers Therefore, there is an idea that the project "Army Weapons Control System" is needed for convenience. easy to use by staff increase operational efficiency.

Keywords: Control system, military equipment, Royal Thai Army

1. Introduction

due to national defense, It is necessary for the stability of the country and may also lead to the creation of economic advantages. For Thailand, it is considered a user of national defense technology. But the production unit in Thailand, which is a government agency under the Ministry of Defense, can be considered There is potential in research and development. Including the production of weapons to meet the needs of the army, which is the main user. and for commercial purposes to support the operation Security operations and support the economic development policy according to the government's Thailand 4.0 policy, the development of Thailand's defense industry. Looking back in the past, it was found that factories in the Ministry of Defense Using low production capacity, resulting in inefficiency in utilizing

resources that the state has already invested (both people, tools, and budgets). There is no long-term plan to procure domestically produced weapons for more than 2 years due to lack of principles/concepts. practical joint combat resulting in a lack of unified military standardization There is no unified procurement system, thus no production integration. (duplicate production /different production) and the private sector's inability to plan investments. or the specific properties of the user's equipment not conducive to the development of Thailand's defense industry Research and development to lead to industrial production has obstacles. Due to the uncertainty of user/clan needs and capability configurations and military needs, it's Boston Up and easily adaptable. The private sector has no confidence in

investing in innovation. and product development and to jointly invest with the government at present The Army is armed. Armaments used in defense of the country of many types and types, both procured, purchased from abroad and invented, produced for use within the country. The data is stored in the program. Makes it difficult to link with a lot of information. and make it difficult to control Causing the Army's armaments to be controlled into categories For easy search and control to prevent the loss of weapons and ammunition. Therefore, a program for the control of army equipment information was created. to be proportional, can be linked from running in many ways The department also uses the design principle in the form of WEB Application Source: W. Polphopoom (Iamsiriwong,2019). Using MYSQL Program Source: C.

Suphathakorn (Suphathakorn, 2019). To collect the Database Source: O. Iamsiriwong (Lee,2021). about using Connect Database PHP Source: W. Rungsawang (Omar, Alijani, and Mason , 2011).

from the aforementioned problem. make the project organizer Therefore, there is an idea to make a project on "Army Equipment System" to make it easier for officers to use and increase the efficiency of the army's operations in the future. the assessment of street green-based GSV,is so interesting as examples of research by Xiao et al, Ki and Lee (Sanit,2011) from the above problems make the project organizers Therefore, there is a concept that must be made in the project titled "Army Equipment Control System" in order to facilitate the use of officers and increase the efficiency of operations in the army as well. for receiving - disbursement

2. Material Methodology

Education and Data Collection

1. The working process of the original system

1) The supervisor prints and sends the disbursement report to the Accounting Department for disbursement.

2) Accounting department to print out the information for receiving - disbursement and recording.

3) Accounting department, print control, send the receipt - disbursement report to the arsenal officer.

4) Armory officers check the receipt-disbursement report.

2. New system requirements

1) Control account category, view email from supervisor and check disbursement

2) The control account category fills in information for receiving - disbursing and recording data.

3) Accounts section sends e-mails and prints the report to the armory staff.

4) Armory staff will check email and report paper to receive – disbursement

3. Results and Discussion

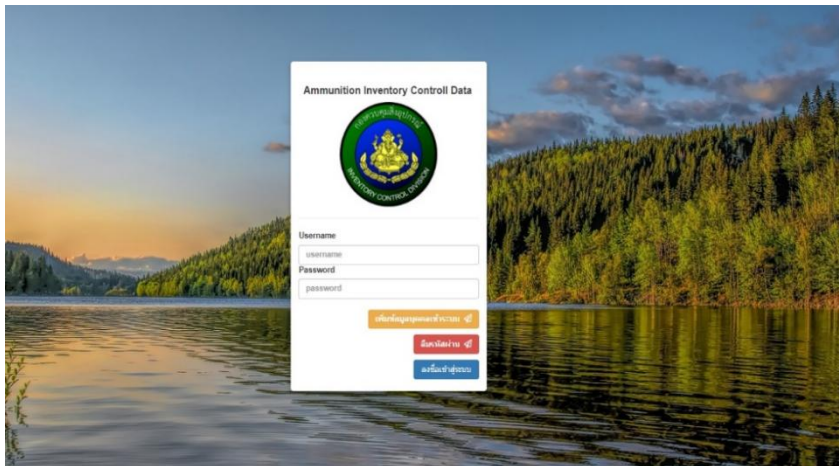


Figure 1: Design a login screen for staff

ยศ

เลือกชั้นยศ

ชื่อ

name

นามสกุล

surname

ตำแหน่ง

position

หมายเลขประจำตัวข้าราชการ

code

Username

username

Password

password

ส่วนงาน

ส่วนงาน นก.

สิทธิ์การเข้าถึงข้อมูล

สิทธิ์การเข้าถึงข้อมูล

Submit

RESET

Figure 2: Staff information management

Displays the staff information management screen. The Add Officer Information Management screen contains the following functions.

1) Fill out the officer's profile.

2) Submit for confirmation

3) Reset Cancel

Screen design for supervisors and supervisors

ยอดคงคลัง										
ID	Line	กลุ่มชื่อ ส.5	รายการ,ชนิด	Dodic	คลัง 1	คลัง 2	คลัง 3	คลัง 4	คลัง 5	คลัง 6
0000	0				2,000	2,000	0	0	0	0
0001	1	ก.ป.ส.ช.12	ขนาด 12 เมอร์ 00	A011	510,000	10,000	0	0	0	0
0002	2	ก.ป.ส.ช.12	ขนาด 12 เมอร์ 00	A011	0	92,801	0	134,981	0	39,856
0003	3	ก.ป.ส.ช.12	ขนาด 12 เมอร์ 6	A013	100,000	0	0	0	0	0
0004	4	ก.ป.ส.ช.12	ขนาด 12 เมอร์ 00	A014	0	0	0	0	0	0
0005	5	ก.ป.ส.ช.12	ขนาด 12 เมอร์ 00	A014	0	0	0	16,200	0	0
0006	6	ก.ป.ส.ช.12	ขนาด 12 เมอร์ SG	A014	0	570	0	6,340	0	0
0007	7	ก.ป.ส.ช.12	ขนาด 140 เกจ	A055	0	0	0	0	0	0
0008	8	ก.ป.ส. 5.56 มม.	ธล.M193 กลอง	A066	0	710,810	380	0	0	0
0009	9	ก.ป.ส. 5.56 มม.	ธล.M855 กลอง	A058	0	35,801	91,636	44,773	2,609,354	399,817

Figure 3: Inventory information

The Inventory Information screen includes the following functions:

View information in the work section.

รายนามหน่วยและที่ตั้ง						
ลำดับ	นามหน่วย	กองทัพอากาศ	พื้นที่ มทบ. รันคิด	ฐานะหน่วยกับการสนับสนุน	จังหวัด	ดูข้อมูลเพิ่มเติม
1	ร.181	กองทัพอากาศ	มทบ.43	ส่วนกำลัง	สระบุรี	ดูข้อมูลเพิ่มเติม
2	ร้อย.อา.ร.1	กองทัพอากาศ	มทบ.43	ส่วนกำลัง	สระบุรี	ดูข้อมูลเพิ่มเติม
3	ร้อย.อา.ร.2	กองทัพอากาศ	มทบ.43	ส่วนกำลัง	สระบุรี	ดูข้อมูลเพิ่มเติม
4	ร้อย.อา.ร.3	กองทัพอากาศ	มทบ.43	ส่วนกำลัง	สระบุรี	ดูข้อมูลเพิ่มเติม
5	พัน.ธส. ร้อย.ธส.ก.	กองทัพอากาศ	มทบ.43	ส่วนกำลัง	สระบุรี	ดูข้อมูลเพิ่มเติม
6	ส.4.ธ. ร.1.ก.ร.	หน่วยอื่น	มทบ.43	หน่วยอื่น	สระบุรี	ดูข้อมูลเพิ่มเติม
7	พัน.1	กองทัพอากาศ	มทบ.11	ส่วนกำลัง	กรุงเทพมหานคร	ดูข้อมูลเพิ่มเติม

Figure 4: information in the section

Create a bill of lading

ข้อมูลใบเบิก

ทบ. 468 - 512

เจ้าหน้าที่สร้างใบเบิก ส.อ.พงศธร อ้นชูฤทธิ์
 วันที่สร้างใบเบิก : 27/06/21 18:06:22

ที่	ใบเบิกกระสุน สาย สป.	แผ่นที่ ในจำนวน แผ่น
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หน่วยจ่าย คลังแสง 1
 หน่วยเบิก ร.1 พัน 1 รอ.
 เบิกให้ พระพรหม จินดลาภไพโรจน์

เปิดในกรณี ฝึกศึกษา
 หลักฐานที่ใช้ในการเบิก 110

ลำดับ	LINE	รายการ	ชนิด	DODIC	จำนวน
ทะเบียนหน่วยจ่าย <u>จำ โอภาส รักดี</u> (ลงนาม) พันเอก พงศธร อ้นชูฤทธิ์ (ผู้ตรวจสอบ) ตำแหน่ง <u>เสมียนบัญชีคุม สป.2-4</u>					

Figure 5: Create a bill of lading

Table 1. User Sanctification

Efficiency of the armament system	Mean	S.D.	level of satisfaction
1. User Satisfaction			
1.1 satisfied with the system	4.31	.76	good level
1.2 meet the needs of use	4.34	.70	good level
2. Recognition of benefits			
2.1 Helps reduce operational procedures	4.18	.80	good level
2.2 performance appraisal	4.21	.79	good level
2.3 Reduce time for evaluating performance	4.20	.78	good level
total satisfaction			good level

The results of the satisfaction assessment of the use of the army equipment system of the system users found that the

evaluation from the service users found that the overall level was at a good level.

Table 2. Expert Sanctification

Efficiency of the armament system	Mean	S.D.	level of satisfaction
1. System quality			
1.1 Easy to use information	4.08	.80	good level
1.2 Save data to prevent loss	4.15		good level
1.3 Checking and correcting information	4.23	.74	good level
2. Information quality			
2.1 Data Accuracy	4.24	.92	good level
2.2 Benefits of using information	4.21	.93	good level
2.3 Use of Information	4.21	.89	good level
3. Quality of management			
.1 Network connection to access the program	3.77	.98	good level
3.2 Give advice on how to use the system.	3.90	.86	good level
3.3 Facilitate access to the system	3.90	.90	good level
total satisfaction			good level

The results of the expert evaluation of satisfaction in the use of the Army's equipment system found that the evaluation from the service users found that the overall level was at a good level.

Discussions

Army Weapons Systems Data is stored in a program allowing the Army Weapons Ammunition Control to be organized into categories. for easy search and control to prevent the loss of weapons and ammunition and operate as a system which is in line with N. Chansoklin, Guidelines for the development of military standard systems, Ministry of Defense. The results of the research showed that Guidelines for the development of military standard systems, the Ministry of Defense has a form of "PUDI System" consisting of 4 steps: 1. A prototype from research and

development. (Pre-production Prototype) The output must pass the standard more than 50 percent. 2. User (User) The product obtained at this stage must be accepted by the user and pass the standard more than 75%, consisting of 3 The parts are as follows: 1) 3 direct units, 3 armed forces, 2) government agencies, 3) private agencies, 3. The Ministry of Defense's Processing Plan, 4. Industrial Standard certification, production obtained at this stage must pass the criteria 100 percent standard. Recommendations from the study. The researcher has the following recommendations: 1. Should require all sectors to come together to create a Master Plan of Military Standards of the Ministry of Defense; Possibility of standard work 3. Prototyping research 4. Production line prototyping 5. Pilot production should begin 6. Proceeding to industrial production

1 advantages/benefits

1) Allows the commander to see the remaining ammunition to be disbursed in each treasury.

2) Make the accountants control the ammunition balance and make disbursement Or get ammo to match the balance in the arsenal.

3) Make the arsenal officer look at the ammo balance and make the disbursement to the disbursement officer.

2. Disadvantages / Disadvantages

1) If the system has an error, it may waste time in disbursement.

2) If there is no internet, users cannot connect to the program.

Problems and Obstacles

Updates of the development program that may need to be modified or added to the work for the staff. which may be difficult to meet the needs of users Guidelines for development

and application in conjunction with other works in the next step In the future, will develop in collaboration with other agencies, such as hiring programmers to develop difficult parts. or update the program in different parts

4. Conclusions

From studying problems and designing programs for the army equipment system that meet the needs of users. Weapon system program design make a supply Purchasing army weapons into categories easy to find and control all applications of the system can solve problems such as the loss of weapons and equipment. Thus, making it possible to increase operational efficiency and the results of overall satisfaction assessment on the part of system users. and that of experts was at a good level in both cases. which can actually be used for work in the Royal Thai Army.

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