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CONFERENCE PROGRAMS AND ABSTRACT

**ADVANCING SUSTAINABLE SCIENCE AND TECHNOLOGY
THROUGH EFFECTIVE COLLABORATION**

OCTOBER 20-21, 2021

**Palembang, Province of South Sumatera
Indonesia**

Organized By :



FOREWORD FROM GENERAL CHAIR 5th FIRST 2021 INTERNATIONAL CONFERENCE



Assalamu'alaikum wr wb,

Alhamdulillahirrobbil 'alamin, Thank to the God, almighty, due to His bless and love, we are granted good health and opportunity so that we can meet here in the event of the 5th FIRST and the 3rd SNAPTEKMAS 2021.

The honorable keynote speakers of the 5th FIRST and the 3rd SNAPTEKMAS 2021

Dra. Nana Yuliana, MA., Ph.D., as The Indonesian LBBP Ambassador for the Republic of Cuba, concurrently with the Commonwealth of the Bahamas, Jamaica, the Dominican Republic and Haiti

Prof. Ramaraj Boopathy. from U Alcee Fortier Distinguished Service Professor of Biological Sciences At the Nicholls State University, USA

Dr. Ing. Ahmad Taqwa, the Director of State Polytechnic of Sriwijaya.

The honourable keynote speakers, distinguished guests, all participants, ladies and gentlemen,

For the beginning of my speech, let me welcome all of you with my great warm hug. It is a great honor for me that you choose the 5th FIRST and the 3rd SNAPTEKMAS 2021 as your conference. I am so proud that the authors still become enthusiastic to develop the knowledge although in this pandemic situation. Let us still work hard to support the development of the world through the research, science, and technology in many parts of the knowledge, as what has been purposed by the FIRST conference itself.

In this occasion, I would like proudly to inform you that the 5th FIRST and the 3rd SNAPTEKMAS 2021 as the forum to share knowledge, to search, to find, and to enlarge the link with other industries and universities has attracted so many authors from abroad, such as from: Politeknik Tun Syed Nasir Syed Ismail; MARA University; Politeknik Mukah Sarawak; University Sultan Zainal Abidin, Terengganu, Malaysia; Politeknik Melaka (PMK) Malaysia; Iloilo Science and Technology University (ISAT-U) Philipina; Politeknik Kota Kinabalu; Universiti Teknologi Malaysia; The National University of Malaysia; National Chin-Yi University of Technology (NCUT); Accounting Research Institute UiTM-Malaysia; Management and Science University Malaysia; AlBaha University, KSA, Saudi Arabia; Politeknik Melaka (PMK), Malaysia; Kuantan Community College, Pahang, Malaysia; Universiti Brunei Darussalam; and Ferdowsi University of Mashhad, Iran.

Welcome to all of the researchers that become the collaborators in our research and community service. It is our great honour to have you as our collaborators and participants in the 5th FIRST and the 3rd SNAPTEKMAS 2021.

The honourable keynote speakers, distinguished guests, all participants, ladies and gentlemen,

In this chance, I would like to say thank you very much to the Director of State Polytechnic of Sriwijaya for his full support in the development of the Research and Service Community programs. Due to his hard work and his belief to all of the committee so that this event can be held.

In this occasion, I also would like to convey my big thank to all of the keynote speakers, invited guests, all the participants, all reviewers, and all committee of the 5th FIRST and the 3rd SNAPTEKMAS 2021. Without you all, this event will be nothing. May Allah SWT gives His reward for your sincerity. As the time goes by, it is hoped that our cooperation and coordination in the FIRST and SNAPTEKMAS can be maintained and improved. I hope that you can enjoy this conference and can get a big benefit from this event. I also wish that we can meet again in the forthcoming FISRT ad SNAPTEKMAS

Wassalamu'alaikumwaraahmatullahi wabarakatuh

FOREWORD FROM DIRECTOR OF STATE POLYTECHNIC OF SRIWIJAYA



The honorable, FIRST 2021 and SNAPTEKMAS 2021 keynote speakers,

Dra. Nana Yuliana, MA., Ph.D., as The Indonesian LBBP Ambassador for the Republic of Cuba, accredited to the Bahamas, Republic of Dominican, Republic of Haiti and Jamaica

Prof. Ramaraj Boopathy., from U Alcee Fortier Distinguished Service Professor of biological sciences at the Nicholls State University, USA

Dr. Ing. Ahmad Taqwa, MT., as Director of Politeknik Negeri Sriwijaya

Assalamualaikum wr wb,

Let us extend our gratitude to Allah SWT, the most gracious, the most merciful. Due to His bless, we can gather here, at the Opening Ceremony of the FIRST 2021 and SNAPTEKMAS 2021

First of all, Please let me deliver my warm welcome to all keynote speakers and all participant of FIRST 2021 and SNAPTEKMAS 2021. It is my great pleasure to meet and see you in this event.

Although, there are so many obstacles that should be faced in the pandemic situation, however, as young generation, we should be optimistic, stay strong and be active in searching and finding the solution. The FIRST 2021 and SNAPTEKMAS 2021 as the DIES of State Polytechnic of Sriwijaya annual event will become one of the media to support those activities. The researchers could share knowledge, find partners, and enlarge the collaboration through this event.

Based on the change in the model of the teaching learning activity that focuses on the MERDEKA BELAJAR, State Polytechnic of Sriwijaya has a big desire in getting acceleration in the internationalization of the institution. One of them by improving the overseas and industrial collaboration, especially in joint research and joint publication. In the beginning of 2021, the research and community service unit in Politeknik Negeri Sriwijaya has launched new schemes of research and community service, namely the Overseas Collaboration Research and Overseas Collaboration Community Service. Thanks to God, those schemes have attracted researchers not only from Asia but also several other countries outside Asia, such as: research and community service collaboration with Al Baha University from Saudi Arabia, with Ferdowsi University of Mashhad from Iran, and with Princess Sumaya University of Technology from Jordan, as well as several other foreign universities.

In this occasion, I also would like to welcome all the researchers that become the collaborators in our new scheme of research and community service. It is our great honour to have you as our collaborators.

The honourable participants,

At this time, State Polytechnic of Sriwijaya has held 5 times of FIRST. FIRST publications from previous conferences have been successfully indexed not only in SCOPUS, but also in WOS. This 5th FIRST seminar will be conjugated with the 3rd National Seminar on Community Service SNAPTEKMAS. (National seminar of applied technology for public). All of these are the efforts to improve the quality of Polsri lecturers which significantly have a positive effect on the learning process of Polsri students.

Before ending my speech, I would like to congratulate the participants of The FIRST 2021 and SNAPTEKMAS 2021. May the noble efforts, support, and cooperation of researchers in this conference will continue. Special thanks to the organizer and co-organizer committee of The FIRST 2021 and SNAPTEKMAS 2021 for the hard work and the commitment in realizing this conference. Do maintain the spirit of working in a team and continue to unite in order to display a culture of excellence in the eyes of the country and the world.

With Bismillahirrahmanirrahim, I officiate The FIRST 2021 and SNAPTEKMAS 2021.
Wassalamu'alaikum warrahmatullahi Wabarakatu

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KEYNOTE SPEAKER



Dra. Nana Yuliana, MA., Ph.D.

The Indonesian LBBP Ambassador for the Republic of Cuba, concurrently with the Commonwealth of the Bahamas, Jamaica, the Dominican Republic and Haiti

Her Excellency Ambassador Nana Yuliana, Ph.D arrived in Havana, Cuba on December, 23rd, 2020 to serve her duties as the Ambassador Extraordinary and Plenipotentiary of the Republic of Indonesia to Republic of Cuba, Commonwealth of Bahamas, Dominican Republic, Republic of Haiti and Jamaica. She was appointed by the President of the Republic of Indonesia on October 19th, 2020. Prior to her position as Ambassador Extraordinary and Plenipotentiary, she was Consul General of the Republic of Indonesia in Houston, Texas, United States of America from 2017 –2020, after she was the Director of Mid-Career Diplomatic School at the Ministry of Foreign Affairs of Indonesia from 2014 – 2017. Her first diplomatic assignment was as First Secretary of Political Affairs at the Embassy of Indonesia in Manila from 2001-2005. From 2008 to 2012, she was the Counsellor of Economic Affairs of the Embassy of Indonesia in Bangkok and Permanent Representative of Indonesia to the United Nations Economic and Social Commission for Asia and Pacific (UNESCAP). She attended several meetings related to Millennium Development Goals (MDGs) or Sustainable Development Goals (SDGs) issues. Her bachelor's degree was English Education from Institute of Teacher's Training in Jakarta, then she pursued her Master Degree in Applied Linguistics for Macquarie University in Sydney, Australia and also International Relations from University of Indonesia in Jakarta, Indonesia. She completed her Doctoral Degree in Development Studies from the University of Santo Tomas, Manila, Philippines in 2006. While serving as a diplomat since 1995, her passion in teaching and learning encourages her as well to share her knowledge and teaches at the University in Jakarta, Indonesia. During her tenure as Consul General, she was very active in promoting Trade, Tourism, Inbound and Outbound Investments and very keen to engage with Universities for cooperation in human capital development.

KEYNOTE SPEAKER



Prof. Ramaraj Boopathy

Alcee Fortier Distinguished Service Professor of biological sciences
at the Nicholls State University, USA

Fulbright Scholar Fulbright Senior Specialist World Class Professor-Government of Indonesia. Honorary Visiting Professor, ITB, Indonesia Alcee Fortier Distinguished Service Professor John Brady Endowed Professor in Biological Sciences Nicholls State University Business Address: Alcee Fortier Distinguished Service Professor John Brady Endowed Professor in Biological Sciences Department of Biological Sciences Nicholls State University Thibodaux **EDUCATION:** B.Sc. Zoology, University of Madras, India; 1979 M.Sc. Environmental Biology, Tamil Nadu Agricultural University, India; 1981 Ph.D. Environmental Biology, University of Madras, India; 1986 **UNIVERSITY RESPONSIBILITIES:** Responsibilities include Teaching Environmental Biotechnology, a Senior and Graduate level course, Marine and Environmental Biology (Graduate Course), Microbiology and Environmental Biology courses. Research interests include Bioremediation of Hazardous Chemicals and Anaerobic Microbiology. Service includes advising students, participate in Departmental and University committees and serving the local and regional communities. Advisor to Masters Program in Marine and Environmental Biology. **PROFESSIONAL EXPERIENCE:** January 2013 – Present: John Brady Endowed Professor in Biological Sciences, Department of Biological Sciences, Nicholls State University, Thibodaux. Teaching, Research, and Service to the University and Community. August 2012 – Present: Alcee Fortier Distinguished Service Professor, Department of Biological Sciences, Nicholls State University, Thibodaux. Teaching, Research, and Service to the University and Community. August 2004 – Present: Distinguished Service Professor, Department of Biological Sciences, Nicholls State University, Thibodaux. Teaching, Research, and Service to the University and Community. **MAJOR AREAS OF RESEARCH INTERESTS:** Anaerobic digestion, Composting, Biodegradation of hazardous chemicals. Antibiotic resistant bacteria and Antibiotic resistance genes in the aquatic ecosystem. Isolation and identification of novel bacteria. Anaerobic degradation of explosive chemicals with particular reference to sulfate reducing bacteria. Design and development of biological reactor systems. Microbial immobilization of

heavy metals and radionuclides. Alcohol production from agricultural residues. Water quality in the wetlands. Alternative to sugarcane burning, Biological control of termites. Organic ways to control land loss and coastal restoration.

KEYNOTE SPEAKER



Dr. Ing. Ahmad Taqwa, MT.

Director of Politeknik Negeri Sriwijaya Indonesia


Director of State Polytechnic of Sriwijaya, other than that, he is still active at Head of The Research and Publication Commission Forum Director of State Polytechnical In Indonesia, Founder of The Online Journalist Board (IWO) Sumsel, Chairman of The Advisory Board of UKM Nusantara Palembang and Assessor of Higher Accreditation Board. **EDUCATION:** Diplom Ingenieur Electrical Engineering HTL, Ingenieurschule Beider Basel, Switzerland; 1994, Magister (2005) and Doctoral (2010) at Electrical Engineering, Bandung Institute of Technology, Indonesia. **RESEARCH:** Head of Research Assignment “Mini PLTS Periodic Cooling System to Overcome Overheating in Palembang City” (2019), Member of The Research Assignment “Effects of Sea Salt Dust Collection on Output Loss and Solar Panel Output Efficiency” (2020), and Head of Research Assignment “Design and Build of Wireless Sensor Network Prototype Detection Of Landslides Based on IOT and LORA” (2020). **DEDICATION:** “The Design and Evaluation of Virus Scan in The E-Mail System in SMA N 5 Palembang” (2018), Assignment Service “Utilization of WSN Technology in Parking Air Monitoring Foundation SMP Harapan Mulia Palembang” (2019), Development of Teaching Materials with Interactive Multimedia with Education Game for Harapan Mulia Junior High School Students” (2020). **AWARD:** Certificate In Participating In The 200 Hour Advanced Technical Teacher Training awarded by FONTYS and PEDC (1998), Satyalancana Karya Satya X Year 2011 And Satyalancana Karya Satya XX Year 2017 by The President of The Republic of Indonesia. **WORKSHOP:** Seminar and Focus Group Discussion Forum The Rector of Indonesia “Economic Stability In The Vuca Area”, Ujung Pandang (2020), Workshop on Using Integrated Resources Information System Applications For Lecturers of State Polytechnical Polytechnic, Palembang (2019) And Workshop of Learning Methodology of Polsri Lecturers and Outside Education Domicile (PDD) as a Source Person, Palembang (2019).

RUNDOWN
The 5th FIRST 2021 INTERNATIONAL CONFERENCE
(FORUM IN RESEARCH SCIENCE AND TECHNOLOGY)
SNAPTEKMAS (Seminar Nasional Aplikasi Teknologi pada Masyarakat) 2021
Palembang, South Sumatera, Indonesia
Thursday, October 21, 20201

| | | Thursday, October 21, 20201 | | | |
|-----------------|--|---|----------------------|--------------------------------------|--------------------------------------|
| No. | Session | Person in Charge | Time Allotment (WIB) | Liaison Officer | |
| 1. | Registration | Event Section Committee | 07.00 – 08.00 | Doeslohal Djumrianti, S.E.MIS., Ph.D | |
| 2. | The Opening Ceremony | | | | |
| 3. | Do'a | | | | |
| 4. | Indonesian National Anthem | | | | |
| 5. | Chair Report Speech | Event Section Committee | 08.00 – 09.00 | | |
| 6. | Speech and Opening Remarks by Director of State Polytechnic of Srijijaya | | | | |
| 7. | Souvenirs Gift, Group Photos | | | | |
| PLENARY SESSION | | | | | |
| No. | Keynote Speaker | Affiliation | Time Allotment (WIB) | Moderator | Liaison Officer |
| 1. | Dra. Nana Yuliana, MA., Ph.D. | The Indonesian LBBP Ambassador for the Republic of Cuba, concurrently with the Commonwealth of the Bahamas, Jamaica, the Dominican Republic and Haiti | 09.00 – 10.00 | Tiur Simanjuntak M.Pd. | Doeslohal Djumrianti, S.E.MIS., Ph.D |
| 2. | Prof. Ramaraj Boopathy | Alcee Fortier Distinguished Service Professor of biological sciences at the Nicholls State University, USA | 10.00 – 11.00 | Prof. Hasan Basri | Dr. Nyayu Latifah Husni, M.T. |
| 3.. | Dr. Ing. Ahmad Taqwa, MT. | Director of Politeknik Negeri Srijijaya, Indonesia | 11.00 – 12.00 | Jaksen M. Amin, M.Si. | Dr. Martha Aznury, S.Pd., M.Si. |

PARALLEL SESSION

| No. | Theme | Room | Time | Moderator | Articles |
|-----|--|------|---------------|---|----------|
| 1. | TRACK 1 (Engineering and Science) | 1 | 13.00 – 16.00 | Dr. Eng Tresna Dewi, M.Eng./ Ika Sulianti, ST, MT | 15 |
| 2. | TRACK 1 (Engineering and Science) | 2 | 13.00 – 16.00 | Dr. Martha Aznury, M.Si./ Indah Purnamasari, M.Eng. | 14 |
| 3. | TRACK 1 (Engineering and Science) | 3 | 13.00 – 16.00 | Fatahul Arifin, M.Eng, Ph.d./ Dr. Indrayani, S.T., M.T. | 13 |
| 4. | TRACK 2 (Computer Science, Computer Engineering, Information System, Informatics Management) | 4 | 13.00 – 16.00 | Rika Sadariawati, M.Si./ M.Miftakul Amin, S.Kom., M.Eng | 13 |
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| 6. | TRACK 3 (Social Science) | 6 | 13.00 – 16.00 | Doeslohah Djumrianti, S.E.MIS., Ph.D/ Dr. Marieska Lupikawati | 13 |
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| 8. | SNAPTEKMAS 1 | 8 | 13.00 – 16.00 | Yumi Oklarina, ST, MT/ Mouland Irwadi, SE. M.Si. | 15 |
| 9. | SNAPTEKMAS 2 | 9 | 13.00 – 16.00 | Leni Novianti, M.Kom./ Maivi Kusnandar, M.Kom | 15 |
| 10 | SNAPTEKMAS 3 | 10 | 13.00 – 16.00 | M Husni Mubarak, M.Si./ Martinus Mujur, ST, MT | 15 |
| 11 | SNAPTEKMAS 4 | 10 | 13.00 – 16.00 | Dr. Ade Silvia H, MT./ M. Sopian Soim, ST, MT | 13 |



CLOSING SESSION

| Event | Time | Room |
|--|--------------|-----------|
| <ul style="list-style-type: none">- Closing Ceremony- Announcement of:<ol style="list-style-type: none">1. Best Paper FIRST IC 20212. Best Paper SNAPTEKMAS 20213. Best Presenter FIRST IC 20214. Best Presenter SNAPTEKMAS 2021- Quiz Online | 16.00– 17.00 | Main Room |

TRACK 3 (Social Science)

ROOM : 6
 TIME : Thursday, 21 October, 2021/ 13.00 - 16.30
 ARTICLES : 13
 MODERATOR : Doeslohal Djumrianti, S.E.MIS., Ph.D/ Dr. Marieska
 Lupikawati

| NO | Time | ID | AUTHORS | TITLE | AFFILIATION |
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| 1 | 13.00-13.10 | 3847 | Ayu Chotibah, Bainil Yulina, Desi Apriyanty, Evada Dewata, Pridson Mandiangan | THE INNOVATION OF SOUTH SUMATERA TRADITIONAL BATIK E-COMMERCE APPLICATIONS | State Polytechnic of Sriwijaya |
| 2 | 13.10-13.20 | 3683 | M. Thoyib, Riza Wahyudi, Firmansyah, Darul Amri | THE ANALYSIS OF COST QUALITY ON PRODUCTIVITY OF IRON RAILING PRODUCTS IN SMALL AND MEDIUM BUSINESS IN PALEMBANG | State Polytechnic of Sriwijaya |
| 3 | 13.20-13.30 | 3757/3756 | Nelly Masnila, Firmansyah, Jovan Febriantoko, Riana Mayasari, Jamaliah Said | Quality of Financial Reporting and Impact of GGG Implementation: Study on Local Government in Indonesia | State Polytechnic of Sriwijaya |
| 4 | 13.30-13.40 | 3796 | Evi Agustina Sari, Sri Gustiani, Yusri, Tiur Simanjuntak | An Error Analysis of English Sentence Construction in Writing Subject Made by the Students of the English Department at Sriwijaya State Polytechnics | State Polytechnic of Sriwijaya |
| 5 | 13.40-13.50 | 3827 | Edwin Frymaruwah, Farah Aida Ahmad Nadzri, Periansya, Evada Dewata | DISCLOSURE OF SUSTAINABLE PERFORMANCE IN HIGHER EDUCATION IN INDONESIA | State Polytechnic of Sriwijaya, UiTM |
| 6 | 13.50-14.00 | 3976 | Hendra Hadiwijaya Febrianty Rezania Agramanisti Azdy | Improvement of LPKA Class 1 Palembang Electronic Dashboard with Field Performance Monitoring | Palcomtech Polytechnic, STMIK PalComTech |
| 7 | 14.00-14.10 | 3853/4034 | Neneng Miskiyah, Purwati, Yulia Pebrianti, Keti Purnamasari, Nyimas Miftahul Jannah, | OPTIMIZATION OF INCOME PARAMETERS OF SONGKET CRAFTSMEN ON KOPERASI SONGKET PALEMBANG | State Polytechnic of Sriwijaya |

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Automation of The Palembang Semage Fabric Yarn Spinner

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ABSTRACT

Songket weaving craft of Palembang City has been the center of the easy ikat weaving craft since ancient times and has become the hallmark of the city of Palembang. Currently the production process used by the songket weaving craft is still very simple, most of the work process in making this woven fabric is done manually. This causes the production process to take a relatively long time compared to the manufacture of fabrics in general. The yarn spinning device is modified in such a way that the yarn spinner can work with the help of electronic components. The yarn spinner is given a DC motor which has previously been programmed using the L298N Motor Driver so that it can rotate as needed and is connected to the Node MCU ESP8266 module so that it can be connected to an Android Smartphone which is used as a remote control to run the yarn spinning device. The ESP8266 Node MCU functions as a command provider for each component, the Gearbox DC Motor functions as the main driver for the coils, the L298N Motor Driver functions as a DC Motor controller, and the MG966R Servo Motor functions as a thread guide to the left and right so that the results of the thread roll look neat. The results of testing how many spools of yarn are in a fast IoT state in a period of 5-60 minutes at a time of 60 minutes get very fast results compared to manual.

Keywords: *Artificial Intelligent, Arduino UNO, Embedded System, Modul ESP 826*

1. INTRODUCTION

Songket Weaving The city of Palembang has been the center of easy ikat weaving since ancient times and has become a hallmark of the city of Palembang. Currently the production process used by the songket weaving craft is still very simple, most of the work process in making this woven fabric is done manually. This causes the production process to take a relatively long time compared to the manufacture of fabrics in general. A series of work processes in the manufacture of woven fabrics consists of 2 types of processes, namely the process of winding yarn and the process of making cloth. In the manufacture of this thread winding consists of the process of winding the thread and arranging the thread. While the fabric making process consists of the process of *reek* (arranging the threads in the field), giving motifs/designing images, binding motifs, *colet* (giving color combinations), dyeing, releasing ropes, unraveling threads to be used as bait, spinning weft on pallets and lastly. is the weaving process. If the sum of the entire work process, it takes as many as 14 work processes to make woven fabrics. This number of series of processes

causes the process of making this woven cloth to take a long time.

The lack of facilities for supporting the production process in Palembang Songket Weaving is in the process of winding yarn. Based on observations, it is known that the thread roller used by the people of Palembang is still very simple and takes a long time. Based on this, the problem in this design is whether the existing design of the yarn winder can minimize the production process time effectively and efficiently? How is the winding machine that can minimize production time to be effective and efficient? The design of this tool focuses on the effectiveness and efficiency of yarn winding time. Where this thread winder must be able to meet the needs and desires of workers. Through the development of this tool system, it is hoped that the community can be fast in terms of winding yarn. Where this system will make it easier for people to roll the thread. So based on the tool system thinking above.

2. DESIGN SYSTEM

In the design there are three underlying elements, namely functional, aesthetic, and economic. Good design means having a good quality of function, depending on the goals and general design philosophy, that the goals differ according to needs and interests, and that design efforts are oriented to the results achieved, implemented and carried out as optimally as possible.

This research is a research that aims to create software that can be used as a controller for the songket woven thread winder which is expected to minimize the time used when rolling the thread if it is done manually.

In making this software use the Arduino IDE and software. Android Studio The Android Studio software is used to create applications that function as on/off controllers and the speed of dc motors and the Arduino IDE software is used to create programs to connect android applications to NodeMCU via wifi to drive dc motors and servos.

Previously made block diagrams, that function to determine how the entire programming circuit will work on the software used.

Electronic design is about all stages related to all series of tools, such as layout circuits and component installation. Mechanical design is the process of completing a tool which includes the manufacture of mechanical tools to optimize the appearance of the tool made. The process of designing a thread winder using an IoT-based DC motor begins with determining the initialization of the components to be used, then proceeds with tool design, after that, installs components, and after that makes a simulation of the tool that has been made.

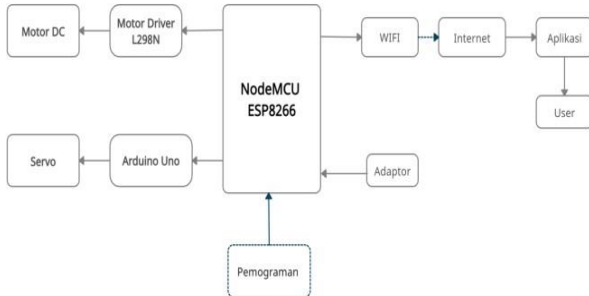


Figure 1 Block Diagram System

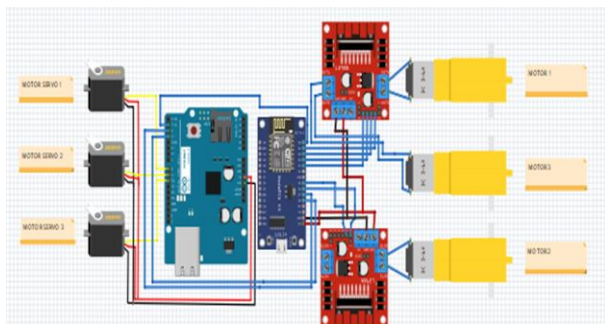


Figure 2 Desain Using Automation of the Palembang Samage Fabric Yarn Spinner

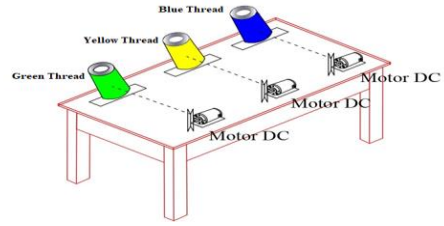


Figure 3 Tool Design for Mechanic

3. CURRENT RESULT

In determining the results of the test, the researcher will use uses the Node MCU ESP 8266 which is in charge of giving orders, processing all inputs and regulating all outputs., Gearbox DC Motor serves as the main driver for the coils, L298N Motor Driver functions as a DC Motor controller, and Servo Motor MG966R which functions as a thread guide to the coil. left and right so that the results of the thread roll look neat.

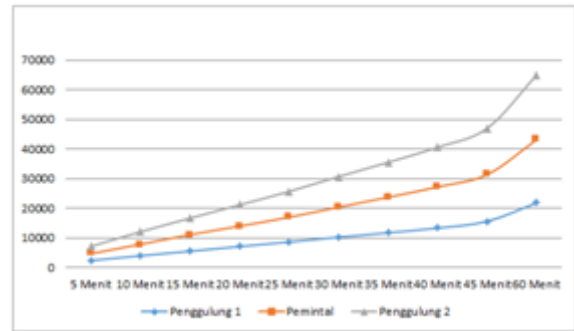


Figure 4 Graph for Fast Yarn Roll

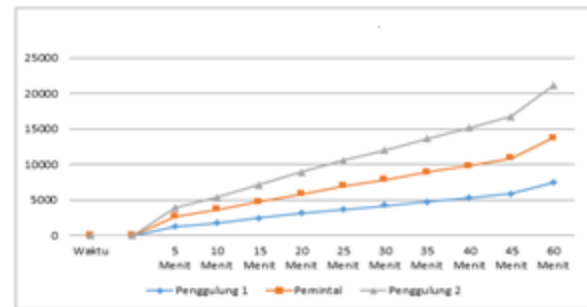


Figure 5 Medium Yarn Roll

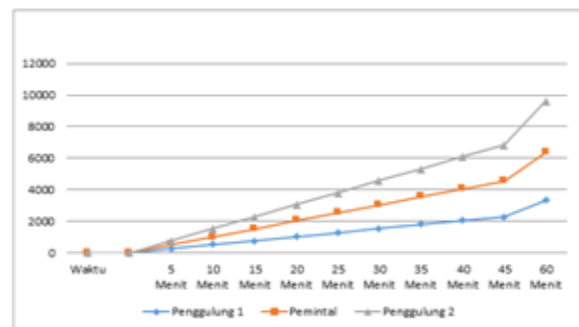


Figure 6 Manual Yarn Roll



Figure 7 Program injection into Android

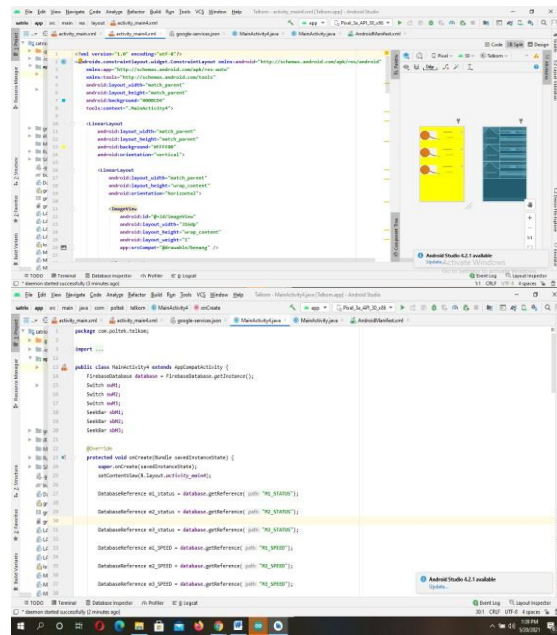


Figure 8 Sketch Layout Controller and Sketch Switch and Speed

Table 1 Based on the tests that have been carried out, the testdata obtained are as follows

| Motor Condition Onthe Android Application | | | Speed | Description |
|---|-----|-----|-------|---|
| M1 | M2 | M3 | | |
| OFF | OFF | OFF | 0 | three DC motors on the mechanical rollers do not move. |
| ON | OFF | OFF | 100 | The first DC motor on the mechanical roller is moving, while the second and third do not move |
| OFF | ON | OFF | 100 | The second DC motor on |

| | | | | |
|-----|-----|----|-----|---|
| | | | | the mechanic The roller is moving, while the first and third do not move |
| OFF | OFF | ON | 100 | The third DC motor on the mechanic Tool the rollers move, while the first and second immovable |
| ON | ON | ON | 100 | Third Motor DC on mechanical equipment moving at a speed spindle 100. |
| ON | ON | ON | 50 | Third Motor DC on mechanical spindle tool moving at a speed reduced to 50. |

4. CONCLUSION

The results of testing how many spools of yarn are in a fast IoT state in a period of 5-60 minutes at a time of 60 minutes get very fast results compared to manual. The results of IoT in slow conditions, IoT slowing down caused by network connection factors that have an impact on the tool, the result is that at 60 minutes, IoT is slightly slower than fast IoT. The results of the spools are done manually using mechanical power to roll. The results of the spools in 60 minutes are only 3,000 spools, this proves that IoT is able to work to roll threads very quickly compared to rolling still using manual power.

AUTHORS' CONTRIBUTIONS

"Eka susanti' creating is making research data collection, with the testing how many spools of yarn are in a fast iot".

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" In writing this paper, the researcher has conducted several sample trials with reference to references as reference material, to improve this paper, the researcher also thanks the previous authors, and the researcher also

apologizes if there are different writing words. Thank you once again we the researchers say"

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