

Comms Trial 1

27 MAY 2024 / 11:45 AM / JW MARRIOTT

Attendees

1. 2LT JIA LE
2. 2SG SHAUN
3. 3SG ETZEL
4. LCP HAO WEN
5. LCP JUSTIN
6. LCP JETHRO

Objectives (Total 05)

1. Configuration of 2x PTZs (10, 13) onto TITAN 2 (✓)
2. Walk the ground to identify power sockets for TITANs (✓)
3. Establish a 1-1 PTZ-TITAN connection at all 3x identified PTZ locations (1A, 2A, 2B) (✓)
4. Identify and optimize zoom, threshold index, brightness for identifying faces (WORK IN PROGRESS)



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Observation	Reflection	Recommendation
<p>Poor force prep. Commanders' absence and preoccupation with other duties resulted in inadequate accounting and planning.</p>	<p>Among the oversights were the omission of equipment such as hard hats, and failure to upload plt 2 faces onto TITAN 2 prior to the Comms Trial. Moreover, the absence of adapters at Comms Trial 1 rendered SAF monitors unusable due to incompatibility with TITANs.</p>	<p>It is recommended that commanders prioritize effective communication and promptly report any inadequately prepared items to ensure smooth accounting of equipment.</p>
<p>Incomplete Configuration of TITAN 2. Incomplete Configuration of TITAN 2 hindered its ability to process and deliver command prompts effectively.</p>	<p>Despite the previous efforts by operators to install the required drivers at Mandai Hill Camp, the task was rushed and incomplete.</p>	<p>To rectify this, operators and commanders are scheduled to collaborate with Fusion on 28 May 24, to reconfigure TITAN 2 ahead of the upcoming comms trial on 11 June 24.</p>
<p>TITAN 1 experienced buggy dashboard interface. TITAN 1 experienced bugs while the dashboard was running that impeded its functionality.</p>	<p>Although TITAN 1 successfully established a PTZ-TITAN connection, the dashboard failed to retrieve data from OBS and consequently was unable to update attendance records. Operators attempted to troubleshoot, but concluded that a bug existed in the relationship between FRS and the dashboard, making troubleshooting impossible.</p>	<p>To address this issue, the operators and commanders are slated to collaborate with Fusion on 28 May 24, to debug TITAN 1's dashboard before the forthcoming comms trial on 11 June 24.</p>

Follow-Up-Action Items

1. Install Guest's faces in TITAN 1. (✓)
2. Install Guest's faces and Plt 2 faces in TITAN 2. (✓)
3. Remember to return Coy 2, 2x 40m lan cable.
(Done by Shaun on 24 June 24)
4. Add Guest's faces onto Powerpoint slides, run OBS over the slides and check if FRS can recognise their pictures coherently. (Done by Nic, Jet, Cheng on 4 June) (✓)
 - If FRS does not recognise, proceed to google and build a robust folder containing more of their faces in higher resolution.
(Done by Etzel from 10-14 June)
5. Study and explore the relationship between the change of resolution influencing the FRS consistency and quality (✓)
(Done by Justin & Hao Wen from 3-14 June)
 - Hao Wen & Justin calibrated and maximised the resolution of PTZs, monitor and OBS successfully! (done on 6 June)
6. Attempt to connect VMS with TITANs via LAN cable (✓)
 - Main principle behind establishing wireless connectivity is to align ALL equipment's IP address within Router IP address
 - Wireless transmission of feeds between PTZ - VMS router - cable connection - TITAN (All under the same IP add) was successful
 - However, since FRS's IP is unique to TITAN's IP, FRS was unable to work
 - To bridge this:
 - Change FRS's IP to align with TITAN's (consequently with router and PTZ).. but risky at this juncture
 - Change ALL (TITAN's, router's, PTZ's IP) to align with FRS's IP... but changing back if in the event of failure is uncertain and difficult

7. Arrange for Box Truck and Bus Timings for Comms Trial 2
(Done by Shaun from 3–10 June)

Important Things To Note

1. Both TITANs are connected via the same router/port/switch to establish the same dashboard server. (ie, if TITAN 1 marks XXX as present, TITAN 2's dashboard will reflect that XXX is present)
2. G1 will set up a booth beside us and Nic Kon will issue out identification stickers to the Guests.
3. A photobooth will be situated within the hall itself (no longer outside or on Lvl 1)
4. Attire for the AAD 24 will be formal wear. Long sleeve button top and long trousers. (Instructions by RSM on 4 June)

Next Comms Trial Objectives (Total 03)

1. Demonstrate FRS capability by capturing the additional 25 guests roaming about during Comms Trial 2
2. Optimise Zoom of PTZ and Threshold index of TITAN
3. Identify 3rd PTZ location (decide between Lvl 1/2)
4. Illustrate decors and receive feedback from G1 on PTZ layout and arrangement

Appreciations and Acknowledgments

1. LCP LUONG HAO WEN
2. LCP JUSTIN PUA PIN YOU
3. LCP ISAIAH JETHRO DUCUSIN VALDEZ
4. LCP TAN WEI KIAT NICHOLAS
5. LCP YU GENE
6. LCP CHENG ZHI HONG
7. 3SG MUI SHAO ZE ETZEL
8. 2SG PAN YU HUNG SHAUN

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LCP Luong Hao Wen and LCP Justin Pua Pin You have played pivotal roles in developing a sophisticated attendance tracking system integrating TITAN facial recognition software with PTZ (pan-tilt-zoom) cameras. Their journey involved significant technical, logistical, and personal challenges, which they overcame through resilience and innovative problem-solving.

Contributions and Achievements:

1. Integration of TITAN Facial Recognition with PTZ Cameras:

- **Technical Mastery:** They developed a seamless interface between TITAN's advanced facial recognition capabilities and the dynamic tracking abilities of PTZ cameras. This required deep technical knowledge in both hardware and software integration.
- **Optimization:** Ensuring the system could accurately capture faces in various lighting conditions and angles, leveraging the PTZ cameras' flexibility to adjust focus and position dynamically.

2. Developed wireless transmissions of PTZ feeds to TITAN:

- **Technical Mastery:** They developed a novel solution to transmit PTZ captured feeds wirelessly to the VMS router which connects to TITAN. This required extensive trial and errors and a comprehensive understanding to reorganise the IP addresses of each component to seamlessly integrate wireless transmission of feeds.

3. Resilience and Problem-Solving:

- **Overcoming Technical Hurdles:** They faced numerous technical difficulties, including network issues, hardware malfunctions, and software bugs. Their perseverance in troubleshooting and refining the system was crucial to its success.
- **Innovative Thinking:** Implementing creative solutions such as adjusting the equipment's subnets to establish a stable connection and custom scripts to increase efficiency of the system's stability under various operational conditions.

4. Adversities and Triumphs:

- **Resource Constraints:** They worked under tight resource constraints, often needing to repurpose existing equipment without compromising system quality.

- Stress Management: Despite high pressure and tight deadlines, they maintained a positive outlook and a collaborative spirit, motivating their team and ensuring continuous progress.

Impact:

Their efforts have resulted in a highly effective attendance tracking system that:

- Efficiency: Streamlines attendance management, significantly reducing manual effort and errors.
- Accuracy: Provides high-precision tracking through advanced facial recognition.
- Scalability: Offers a scalable solution adaptable to various organisational sizes and requirements.

Demonstrated Qualities:

- Resilience: Persistently working through technical and operational challenges, showcasing determination and a never-give-up attitude.
- Creative Thinking: Innovatively solving problems and optimising the system, demonstrating their ability to think outside the box.
- Collaboration: Effective teamwork and leadership, guiding their team through complex project phases.

LCP Luong Hao Wen and LCP Justin Pua Pin You's dedication and ingenuity have not only contributed to the development of a cutting-edge attendance system but have also set a benchmark for excellence in technology integration and problem-solving. Their leadership, excellence and resilience in overcoming adversities ensured the overall success of AAD 24.

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LCP Isaiah Jethro Ducusin Valdez exhibited an extraordinary willingness to learn and assist his peers in mastering the Facial Recognition Software (FRS), despite having little prior technical background. His proactive approach in tackling the steep learning curve demonstrated his dedication and adaptability, making significant contributions to the success of AAD 24.

LCP Jethro's determination to understand FRS was evident in his relentless pursuit of knowledge. He immersed himself in learning the system's intricacies, overcoming initial challenges through persistent effort and resourcefulness. This tenacity not only enabled him to become proficient in the software but also positioned him as a valuable resource for his peers, whom he readily assisted in navigating the technology.

In addition to his efforts with the software, LCP Jethro played a crucial role in ensuring the smooth operation of the equipment. He took the initiative to account for and manage the necessary equipment, demonstrating meticulous attention to detail. His proactive troubleshooting of the PTZ cameras were particularly notable, as he resolved technical issues that could have otherwise impeded progress, ensuring that all systems were functioning optimally.

Moreover, LCP Jethro's organisational skills were exemplified in his diligent recording of minutes during each convene at Mandai Hill Camp. This task was essential for maintaining clear communication and documentation, providing a reliable reference for ongoing and future activities. His thorough and accurate record-keeping facilitated effective coordination and decision-making within the team.

Additionally, LCP Jethro took the initiative to identify the factors influencing a good and poor picture required for the FRS to function optimally. Together with 2SG Shaun, LCP Nicholas and LCP Zhi Hong, they organised over 300 pictures in PowerPoint slides before training FRS to recognise and identify the quality of the pictures. The fruits of their labour contributed to optimising the FRS, allowing the team to understand the significant factors differentiating a good/poor quality picture.

Overall, LCP Jethro's remarkable efforts and dedication were cardinal to the success of AAD 24. His deep willingness to learn, coupled with his initiative and support for his peers, underscored his invaluable contributions. Through his actions, LCP Jethro set a high standard of commitment and teamwork, significantly enhancing the overall effectiveness

and success of the event.

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LCP Tan Wei Kiat Nicholas, LCP Yu Gene and LCP Cheng Zhi Hong exemplified remarkable tenacity, contributing significantly to the success of AAD 24. Their unwavering commitment to safety and mission success was evident in their meticulous approach to identifying and rectifying flaws in the route card. This attention to detail was crucial in ensuring the accurate adjustment of the route for seamless travel between Clementi Camp and Mandai Hill Camp.

LCP Tan Wei Kiat Nicholas, LCP Yu Gene and LCP Cheng Zhi Hong's dedication extended beyond their immediate responsibilities. They consistently sought ways to support and encourage their peers, fostering a collaborative and motivated environment. Their proactive efforts in organising stores ensured that accounting for equipment was seamless and efficient. This initiative was instrumental in maintaining the logistical backbone of any comms trial. Additionally, whenever the PTZ cameras were having issues, they would aid in the recovery and troubleshooting.

Moreover, their camaraderie and mutual support were pivotal in creating a cohesive team dynamic. They looked out for everyone, ensuring that no member was left behind. This sense of unity and teamwork was a driving force behind their collective success, reinforcing the importance of cooperation in achieving mission objectives.

Additionally, LCP Nicholas and LCP Zhi Hong took the initiative to identify the factors influencing a good and poor picture required for the FRS to function optimally. Together with 2SG Shaun and LCP Jethro, they organised over 300 pictures in PowerPoint slides before training FRS to recognise and identify the quality of the pictures. The fruits of their labour contributed to optimising the FRS, allowing the team to understand the significant factors differentiating a good/poor quality picture.

In summary, the tenacity, attention to detail, and collaborative spirit demonstrated by LCP Tan Wei Kiat Nicholas, LCP Yu Gene and LCP Cheng Zhi Hong were vital to the success of AAD 24. Their dedication to safety and proactive support of their team underscored their invaluable contributions, setting a commendable standard for their peers.

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2SG Pan Yu Hung Shaun and 3SG Mui Shao Ze Etzel displayed exceptional command and ensured the safety of their operators through the comms trial and during AAD 24. Their meticulous attention to detail was instrumental in planning objectives and timelines, facilitating efficient progress and the successful completion of goals.

2SG Shaun, in particular, took on the critical responsibility of organising logistical transport for both the team and equipment, ensuring seamless transitions from Clementi Camp to JW Marriott. His initiative and leadership by example were pivotal in maintaining the smooth operation of each comms trial. 2SG Shaun's proactive approach not only streamlined logistics but also fostered a sense of reliability and readiness within the team.

Additionally, 2SG Shaun effectively exercised C2 over a small team of operators, organising pictures to optimise and train the FRS. Under his leadership, the task was not only completed efficiently, they were able to identify factors influencing the software which allowed him to request for additional resources (images) to build a more robust database and optimise the FRS greatly.

Similarly, 3SG Etzel focused on the welfare and safety of his operators, diligently monitoring and reporting on their progress. His fervent commitment to his team's well-being and operational success underscored his effective leadership. 3SG Etzel's efforts in maintaining high safety standards and supporting his operators contributed significantly to the overall effectiveness of AAD 24.

Together, 2SG Shaun and 3SG Etzel exemplified outstanding leadership and dedication, ensuring the smooth execution of their tasks and the safety of their team. Their combined efforts were crucial to the success of AAD 24, setting a high standard for command and operational excellence.

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