

## **B. Suggestion**

After analysing the data and finishing the research, there are some suggestion as an output of this research to some parties as follows:

### **1. ICAO**

It is suggested that ICAO will consider to add this word “initials” as a standard phraseology in the Document 4444, Procedures for Air Navigation Services-Air Traffic Management, and also and also in the “pre-defined text” in Controller-Pilot Data-link Communication (CPDLC), so there is no doubt from the controller in using it.

### **2. Controllers and Pilot**

Looking for other possibilities of the use of words outside of standard phraseology to increase the effectiveness and efficiency in controller-pilot communication so that it can be proposed to ICAO.

### **3. Next Researchers**

To find more term that can support the effectiveness and efficiency of communicating in the world of aviation to maintain flight safety.

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## APPENDIX 1

### Research Permit



**AirNav Indonesia**

**Perum LPPNPI**

CABANG MATSC  
 Jl. Bandara Baru Sultan Hasanuddin  
 Makassar 90552  
 Sulawesi Selatan - Indonesia  
 Telp. 0411 - 481 3210  
 Fax. 0411 - 481 3717  
 www.airnavindonesia.co.id

Makassar, 01 Juli 2020

Nomor : 640/GAK/02/LPPNPI/HMS.02.03/VII/2020  
 Lampiran : -  
 Perihal : Persetujuan Izin Penelitian

Kepada Yth.  
 Wakil Dekan Bid. Akademik, Riset dan Inovasi Fakultas Ilmu Budaya  
 Universitas Hasanuddin

di  
 Makassar

1. Menunjuk Wakil Dekan Bid. Akademik, Riset dan Inovasi Fakultas Ilmu Budaya nomor 2767-2779/UN4.9.1/PT.01.04/2020 tanggal 22 Juni 2020 perihal Permohonan Izin Penelitian, disampaikan bahwa pada prinsipnya kami dapat menyetujui permohonan tersebut dengan persyaratan sebagai berikut:
  - a. Daftar Nama Terlampir
  - b. Perusahaan hanya menyiapkan fasilitas tempat melaksanakan Penelitian serta tidak menanggung segala biaya yang timbul dari pelaksanaan kegiatan tersebut.
  - c. Peserta harus mematuhi seluruh peraturan Kantor Cabang Makassar Air Traffic Services Center.
2. Demikian disampaikan, atas perhatiannya diucapkan terima kasih.

a.n. GENERAL MANAGER  
 MANAGER ADMINISTRASI & KEUANGAN  
 MANAGER PERSONALIA & UMUM,



Tembusan Yth. :  
 1. General Manager (sebagai laporan);  
 2. Manager Administrasi & Keuangan.

Lampiran Surat GM Cabang MATSC  
 Nomor : 640/GAK/02/LPPNPI/HMS.02.03/VII/2020  
 Tanggal: 01 Juli 2020

**DAFTAR NAMA PESERTA PENELITIAN**

No	Nama	Nomor Pokok	Judul Tesis
1	Didik Agus Suryono	F022191017	Waypoints Pronunciation in Air-Ground Communication
2	Mohammad Romy	F022191020	The Notion "Initials" as A Polite Refusal Strategy in Conversation Bet
3	Gatut Nugraha Sumarnanto Budhi	F022191018	Procedure Of Similar Callsign in Verbal Air Ground Communication
4	Nur Shella Firdaus	F022191002	The Importance of Understanding Technical Terminology in Coordination Between ATC and Engineering in MATSC
5	Muhammad Dzikra Yaza Pratama	F022191005	Code Switching Applied By Air Traffic Controller During Operation in MATSC
6	Andi Muhammad Alvian	F022191004	Naming Waypoint in Indonesian Airspace
7	Avian Cipta Ramadhan	F022191016	The Use of Phraseology for Communication with all Ground Station in Aeronautical Reporting Office : Politeness Studies
8	Nasya Putri Rahmanianti	F022191033	Homonymous Words in Air Traffic Control Phraseology
9	Hadibowo Wicaksono	F022191032	Light Code To Communicate With Pilot

## APPENDIX 2

### Questionnaire Result of Question Number 1

Timestamp	Nama	1. Seberapa sering anda menggunakan kata "initials" saat melakukan pemanduan lalu lintas udara?
2020/08/26 1:45:53 P	RI	Sering kali
2020/08/26 2:07:04 P	DK	Sering kali
2020/08/26 2:08:39 P	DZ	Selalu
2020/08/26 2:19:30 P	HY	Jarang
2020/08/26 2:27:20 P	EP	Kadang-kadang
2020/08/26 2:35:11 P	MB	Sering kali
2020/08/26 2:37:09 P	EK	Sering kali
2020/08/26 2:53:50 P	DB	Kadang-kadang
2020/08/26 2:54:57 P	RE	Kadang-kadang
2020/08/26 3:11:44 P	TA	Kadang-kadang
2020/08/27 9:19:28 A	KR	Kadang-kadang
2020/08/27 9:19:42 A	WH	Kadang-kadang
2020/08/27 9:42:39 A	HT	Kadang-kadang
2020/08/27 10:06:24 A	RR	Jarang
2020/08/27 10:09:17 A	SG	Sering kali
2020/08/29 9:01:27 P	IR	Kadang-kadang
2020/09/01 7:32:50 A	CK	Sering kali
2020/09/11 11:12:10 A	IK	Kadang-kadang
2020/09/30 11:37:00 A	YM	Kadang-kadang
2020/10/25 2:46:31 P	DF	Sering kali



## APPENDIX 3

## Questionnaire Result of Question Number 2

Timestamp	Nama	2. Menurut Anda Apakah fungsi kata "initials" yang digunakan oleh ATC?
2020/08/26 1:45:53 P	RI	Phraseology penambahan untuk menyatakan bahwa instruksi tersebut bersifat sementara.
2020/08/26 2:07:04 P	DK	memberikan ketenangan kepada pilot karena yang didapat saat ini adalah instruksi awal, bukan akhir.
2020/08/26 2:08:39 P	DZ	Sebagai acuan bagi pilot dalam memperhitungkan ketinggian yang akan didapatnya.
2020/08/26 2:19:30 P	HY	Memberikan instruksi / clearance yg berlaku sementara, sambil menunggu release lebih lanjut. Biasanya berkenaan dgn "conflicting"
2020/08/26 2:27:20 P	EP	Clearance sementara yg d berikan kpd pswt karena ada traffic,
2020/08/26 2:35:11 P	MB	Untuk menekankan ke Pilot bahwa level yang dituju untuk sementara waktu belum tersedia
2020/08/26 2:37:09 P	EK	PENEGASAN, agar Pilot aware bahwa utk sementara ATC belum memberikan CFL sesuai Intended FL km Traffic/ada kondisi tertentu.  KESOPANAN, dimaksudkan memberitahukan Pilot bahwa Intended FL tetap akan dijamin didapatkan Pilot setelah Clear of Traffic.
2020/08/26 2:53:50 P	DB	Biasanya untuk memberikan perintah "awal" yang nantinya akan ada perintah lanjutan. Kebanyakan untuk perintah climb ke level "awal/semntara" karena suatu hal, setelah hal itu selesai, kembali di beri perintah climb menuju RFL a/c tersebut.
2020/08/26 2:54:57 P	RE	Memberikan clearance sementara kepada Pilot karena kondisi traffic dengan perhitungan bahwa dalam beberapa saat kedepan permintaan penuh tersebut akan dapat diberikan.
2020/08/26 3:11:44 P	TA	Opsi sementara
2020/08/27 9:19:28 A	KR	Pemberian batasan tertentu, biasanya saat pesawat climb n descend.
2020/08/27 9:19:42 A	WH	Sbg penekanan dlm pemberian clearance amandement
2020/08/27 9:42:39 A	HT	Memberi kejelasan instruksi terakhir yg disampaikan akan ada tindak lanjutnya.
2020/08/27 10:06:24	RR	Sebagai perintah untuk suatu hal yg belum pasti
2020/08/27 10:09:17	SG	Biasanya digunakan pada saat jumlah traffic cukup padat untuk memberi batasan level awal sebelum mendapatkan level ketinggian yang dituju atau diinginkan, sementara kami masih perlu melakukan koordinasi, menghitung dan mengarahkan pesawat dan lain-lain untuk menjaga kecukupan jarak aman antar pesawat.
2020/08/29 9:01:27 P	IR	Penyampaian Clearance level sementara
2020/09/01 7:32:50 A	CK	Untuk memberikan intruksi atau clearance yg sifatnya "sementara" km blm sesuai dgn pilot request atau kondisi yg seharusnya sesuai FPLnya
2020/09/11 11:12:10	IK	Untuk menerangkan ke pilot bahwa instruksi belim final
2020/09/30 11:37:00	YM	Untuk mengerem laju ketinggian pesawat yang diperkirakan aman sebelum menuju ketinggian yang diinginkan
2020/10/25 2:46:31 P	DF	Sebagai informasi ke pilot bahwa ada kelanjutan instruksi kemudian

## APPENDIX 4

### Questionnaire Result of Question Number 3

Timestamp	Nama	3.Apakah yang terjadi jika Anda tidak menambahkan kata "initials" saat memberikan perintah khususnya climb?
2020/08/26 1:45:53 P	RI	Pilot akan mengkonfirmasi kembali level yang diinginkan dan mengakibatkan voice of loud.
2020/08/26 2:07:04 P	DK	Hampir dipastikan pilot menanyakan apakah instruksi ini final, karena tidak sinkron dengan rencana terbang
2020/08/26 2:08:39 P	DZ	Akan memberi pengaruh terhadap pilot dalam membuat keputusan terhadap ketinggian jelajah, kata initials lebih memberikan kepastian/ancang2 bagi pilot dalam memilih ketinggian jelajahnya.
2020/08/26 2:19:30 P	HY	Pesawat akan tertahan utk mencapai level optimalnya, atau akan terjadinya separasi less than minima jika hal tersebut seharusnya diberikan sbg salah satu separasi
2020/08/26 2:27:20 P	EP	kesimpulan dr pilot, bahwa itu adalah final level ( dalam hal ini initial level yg d req pilot)
2020/08/26 2:35:11 P	MB	Akan terjadi banyak komunikasi yang diakibatkan banyaknya pertanyaan dari Pilot karena tidak mendapatkan level yg dituju
2020/08/26 2:37:09 P	EK	Sebenarnya & sejujurnya sih dim pemahaman sy secara signifikan harusnya tdk ada resiko besar. Tp mungkin karena sudah menjadi kebiasaan & bagi beberapa (oknum) Pilot masih didapati kekurangwaspadan jika tdk menambahkan kata-kata isyarat atau penegasan spt contoh "INITIALS" tsb, maka ATC pun menjadi sedikit latah utk seolah olah wajib menyebutkannya.
2020/08/26 2:53:50 P	DB	Biasanya PIC akan bilang lagi RFL nya, walaupun kita sudah tau melalui e-strip
2020/08/26 2:54:57 P	RE	Jika ketinggian tidak sesuai permintaan maka pilot akan menanyakan apakah clearance tersebut sudah final serta mengulang kembali permintaan ketinggian yang sebenarnya
2020/08/26 3:11:44 P	TA	Pilot akan meminta berkali kali
2020/08/27 9:19:28 A	KR	Pesawat akan request reason. Contoh, sesuai FPL pesawat RFL 340, dan ATC instruct climb FI240 tanpa diawali " initials", pesawat akan confirm req climb sesuai RFL nya.
2020/08/27 9:19:42 A	WH	Ada kemungkinan pilot misleads
2020/08/27 9:42:39 A	HT	Pilot akan confirm km merasa keinginan pilot mgkn blm diterima oleh controller
2020/08/27 10:06:24 A	RR	Akan climb sesuai FL yg diperintahkan
2020/08/27 10:09:17 A	SG	Pesawat akan konfirmasi mengenai level ketinggian yang didapatkan saat itu.
2020/08/29 9:01:27 P	IR	terkadang pilot akan menyampaikan requesting final level lagi ke ATC.
2020/09/01 7:32:50 A	CK	Berpotensi menyebabkan loss of separation
2020/09/11 11:12:10 P	IK	Pilot akan meminta level yg diinginkan
2020/09/30 11:37:00 A	YM	Bisa saja tanpa kata initial, pilot akan terus meminta ketinggian yg diinginkan (load of comm) atau pilot tanpa sadar bablas ke ketinggian yg diinginkan. Tdk sesuai perintah
2020/10/25 2:46:31 P	DF	Pilot pasti akan melakukan konfirmasi

## APPENDIX 5

## Questionnaire Result of Question Number 4

Timestamp	Nama	4. Apakah dengan menambahkan kata "initials" pada perintah anda dapat membantu mengurangi beban kerja?
2020/08/26 1:45:53 P	RI	Benar
2020/08/26 2:07:04 P	DK	ya
2020/08/26 2:08:39 P	DZ	Ya
2020/08/26 2:19:30 P	HY	Bisa iya bisa tidak
2020/08/26 2:27:20 P	EP	Bisa membantu, karena pilot tidak akan report2 req level lg...
2020/08/26 2:35:11 P	MB	Ya.. utamanya dalam komunikasi dengan pilot
2020/08/26 2:37:09 P	EK	Barangkali iya, karena jika Pilot paham dgn maksud penyebutan term tsb, seharusnya akan dapat mengurangi/meniadakan kemungkinan salah bertindak oleh si Pilot, khususnya ttg kesalahan set Cleared Level yg diberikan ATC.
2020/08/26 2:53:50 P	DB	Kata "initials" bisa membantu mengurangi beban kerja. Bisa mengurangi load communication dgn Pilot.
2020/08/26 2:54:57 P	RE	Benar
2020/08/26 3:11:44 P	TA	Iya
2020/08/27 9:19:28 A	KR	Benar, mengurangi workload
2020/08/27 9:19:42 A	WH	Ya
2020/08/27 9:42:39 A	HT	Dalam semua kasus yg instruksi nya dirasa oleh pilot blm sesuai dgn keinginan, pilot selalu confirm, tetapi sebaliknya bila lgs diberi instruksi dgn initials pilot tdk melakukan konfirmasi.
2020/08/27 10:06:24 A	RR	Tidak
2020/08/27 10:09:17 A	SG	Ya .. karena pilot tidak akan bertanya-tanya lagi dan mempunyai keyakinan initial hanya sementara karena ada kondisi tertentu.
2020/08/29 9:01:27 P	IR	Betul. mengurangi reconfirm yang mungkin sudah terjadi di unit sebelumnya
2020/09/01 7:32:50 A	CK	Benar
2020/09/11 11:12:10 A	IK	Ya
2020/09/30 11:37:00 A	YM	Ya
2020/10/25 2:46:31 P	DF	Sedikit mengurangi

## APPENDIX 6

## Questionnaire Result of Question Number 5

Timestamp	Nama	5.Selain climb perintah apalagi yang anda tambahkan kata "initials"?
2020/08/26 1:45:53 P	RI	Heading. Saat memvektor pesawat yang disebabkan adanya traffic.
2020/08/26 2:07:04 P	DK	direct point
2020/08/26 2:08:39 P	DZ	Perintah "descent"
2020/08/26 2:19:30 P	HY	Vector
2020/08/26 2:27:20 P	EP	Heading
2020/08/26 2:35:11 P	MB	Descend
2020/08/26 2:37:09 P	EK	Misal: saat meminta Pilot utk advice (present heading) kpd next sector pada saat melakukan INITIAL contact.
2020/08/26 2:53:50 P	DB	Teman2 ada memakai "initial heading", tetapi saya tidak pernah menggunakannya.
2020/08/26 2:54:57 P	RE	Tidak ada
2020/08/26 3:11:44 P	TA	Descent,heading
2020/08/27 9:19:28 A	KR	Decend
2020/08/27 9:19:42 A	WH	Heading
2020/08/27 9:42:39 A	HT	Descend
2020/08/27 10:06:24	RR	Descend
2020/08/27 10:09:17	SG	Perintah descend.
2020/08/29 9:01:27 P	IR	Heading
2020/09/01 7:32:50 A	CK	Descent, tum R/L heading
2020/09/11 11:12:10	IK	Heading
2020/09/30 11:37:00	YM	Descent
2020/10/25 2:46:31 P	DF	Tidak

## APPENDIX 7

## Questionnaire Result of Question Number 6

Timestamp	Nama	6. Apakah penambahan kata "initials" juga merupakan upaya anda dalam hal kesopanan?
2020/08/26 1:45:53 P	RI	Benar
2020/08/26 2:07:04 P	DK	ya
2020/08/26 2:08:39 P	DZ	Betul sekali. Dalam hal ini kita akan lebih meyakinkan pilot agar tidak ada lagi load communication selanjutnya yg tidak perlu dalam permintaan ketinggian jelajah
2020/08/26 2:19:30 P	HY	Bisa iya bisa tidak
2020/08/26 2:27:20 P	EP	That's right
2020/08/26 2:35:11 P	MB	Bisa ya bisa juga tidak
2020/08/26 2:37:09 P	EK	Betul sekali
2020/08/26 2:53:50 P	DB	Bisa dikatakan begitu, dengan kata "initial" pilot bisa mengerti alasannya kenapa kita kasih levelnya segitu dulu, atc jadi lebih nyaman control nya, tak ada beban untuk cepat2 menaikkan ke RFL tentunya dengan pertimbangan traffic disekitarnya.
2020/08/26 2:54:57 P	RE	Tidak. Lebih kepada menghindari pertanyaan yang bersifat konfirmatif yang tidak perlu sehingga akan menambah workload
2020/08/26 3:11:44 P	TA	Tidak
2020/08/27 9:19:28 A	KR	Tidak
2020/08/27 9:19:42 A	WH	Ya
2020/08/27 9:42:39 A	HT	Tidak, lebih utk memperjelas
2020/08/27 10:06:24 A	RR	Tidak
2020/08/27 10:09:17 A	SG	Ya.. karena initials juga bisa berarti permohonan pengertian kepada pilot atau pemberian informasi kepada pilot bahwa akan mendapatkan level tertentu beberapa waktu terlebih dahulu sebelum mendapatkan level yang diinginkan.
2020/08/29 9:01:27 P	IR	Betul ini salah satu penolakan halus request oleh pilot.
2020/09/01 7:32:50 A	CK	Benar
2020/09/11 11:12:10 P	IK	Tidak
2020/09/30 11:37:00 P	YM	Ya
2020/10/25 2:46:31 P	DF	Betul

## APPENDIX 8

### Biography of Air Traffic Controller Informant

Name : Yuniarto Anggoro Djati  
Place of Birth. : Jakarta  
Date of Birth : 21 Juni 1977  
First Assignment : 1997 (23 years of experience)

#### Licence

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Junior Air Traffic Controller  
Senior Air Traffic Controller

#### Ratings:

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Aerodrome Control Tower  
Approach Control Procedural  
Approach Control Surveillance  
Area Control Procedural  
Area Control Surveillance

#### Work Experiences:

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MATSC - Aerodrome Control Tower  
MATSC – Approach Control Office  
MATSC – Area Control Center

#### Expertise:

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Air Traffic Controller Supervisor  
On The Job Training Instructor  
ATC Trainer in Simulator  
ATC Check Controller

## APPENDIX 9

### Interview With Controller Informant

1. Sudah berapa lama anda menjadi ATC?

*Jawab: 23 tahun*

2. Apakah dalam pengendalian lalu lintas udara komunikasi yang efektif dan efisien itu diperlukan?

*Jawab: Sangat diperlukan untuk mengurangi load of communication agar ATC tidak terlalu sibuk saat melakukan tugasnya.*

3. Dalam komunikasi controller – pilot terjadi sebuah proses yaitu rutin dan non rutin, bagaimana anda mengurangi non rutin komunikasi?

*Jawab: Biasanya kami menggunakan beberapa istilah yang tidak umum salah satunya adalah "initials" walaupun ini bukan pharesology baku namu di dunia penerbangan, khususnya Indonesia, kami sering menggunakan kata "initials" agar pilot tidak mengulangi kembali request intended level-nya.*

4. Apakah anda juga sering menggunakan kata Initial dalam memberikan instruksi climb atau descend yang sifatnya sementara?

*Jawab: Betul sekali, terutama pada saat kita memberikan instruksi Climb, misalnya pesawat minta ketinggian F380, namun karena ada traffic atau lain hal mereka mungkin harus terbang di bawah level itu dulu.*

5. Apakah yang terjadi jika kata initial ini tidak anda gunakan saat memberikan instruksi ke pesawat untuk ketinggian sementara?

*Jawab: Jika kita langsung menginstruksikan misalnya "climb F320", maka pilot akan sering kali melakukan pertanyaan ulang "We are requesting higher level F380". Jika hanya satu pesawat tidak terlalu masalah namun jika banyak tentunya akan menyebabkan load of communication yang tidak perlu seperti itu.*

6. Apakah kata initial ini bisa mengurangi non rutin komunikasi atau workload of communication?

*Jawab: Betul, Jika kita menginstruksikan dengan "climb Intitals to F320", otomatis pilot tidak akan mempertanyakan ulang karena dia tahu hanya sementara di ketinggian tersebut.*

7. Selain instruksi climb atau descend, perintah apalagi yang biasanya anda tambahkan kata initials?

*Jawab: Biasanya instruksi heading, namun jarang, karena biasanya kami menggunakannya untuk instruksi climb atau descend.*

8. Apakah pernah ada case dimana penggunaan kata initials ini menjadi salah satu "safety net" saat anda bekerja? (280 vs 380)

*Jawab: Pernah, saya pernah mengalami satu-dua case dimana terkadang pilot mendengarkan apa yang mereka ingin mereka dengarkan, oleh karena itu dengan penambahan kata "initials" mereka tahu bahwa mereka harus terbang diketinggian sementara. Terkadang juga jika mereka tidak diberikan kata "initials", readback-nya kurang pas, atau terkadang readback-nya benar tetapi pelaksanaannya kurang pas.*

9. Menurut anda apakah kata initial ini layak diusulkan kepada ICAO untuk dimasukkan dalam standard phraseology dalam dokumen ICAO 4444?

*Jawab: Ya, layak sekali, karena dapat mengurangi load of communication, karena pada saat traffic lagi ramai maka kita sebisa mungkin berusaha agar pilot tidak bertanya ulang.*

10. Menurut sepengetahuan anda, kapan kata initials ini mulai digunakan?

*Jawab: Semenjak saya mulai kerja di Operational Room sebagai Radar Controller sekitar awal tahun 2000.*



**APPENDIX 10**

**Data Transcript ATC-Pilot**

**Approach/Terminal Sector (10-03-2018, 10.40-11.40 UTC)**

TIME	PARTY	TURNS	Initials Mark	ATC Instruction
10.40	SJY713	Makassar radar good evening SJY713 departure H270		
	CTL	SJY713 good evening identified on departure left h270 clim F340 initials	1	
	SJY713	Climb F340 initials on h270 SJY713		
10.41	CTV332	Ujung selamat malam CTV332		
	CTL	Station calling say again		
	CTV332	CTV332 sir selamat malam		
	CTL	CTV332 sir selamat malam identified proceed to BADOK fro runway 03 descend to 4000		1
	CTV332	BADOK 4000 for runway 03 CTV332		
	SJY174	SJY174 establish localizer 03		
	CTL	SJY174 position 15 miles touchdown contact Tower 118.1 happy landing pak		
	SJY174	Contact Tower 118.1 thank you sir		
	BTK6183	BTK6183 approaching 12000		
	CTL	BTK6183 descend to 6000 feet		1
	BTK6183	Descend to 6000 BTK6183		
10.43	CTL	SJY715 climbing passing F255 contact ujung 128.3 selamat terbang		
	SJY715	Ujung 128.3 selamat malam pak		
	CTL	Malam Capt		
10.45	CTL	LNI 797 traffic on right side 2 o'clock 8 miles maintaining 10.000 feet a boing 733		
	LNI797	Roger Copied LNI 797		
10.47	BTK6231	BTK6231 approaching 6000 request lower		
	CTL	BTK6231 maintain 6000 feet		1
	BTK6231	Maintain 6000 BTK6231		
	CTL	GIA609 climb F360		1
	GIA609	Climb F360 GIA609		
	CTL	SJY715 traffic on left side 10 o'clock 5 miles will be leaving 7000		
	SJY715	Copied that we are visual contact of traffic SJY715		
	CTL	BTK6231 descend 2000 feet		1
	BTK6231	Descend 2000 6231		
	CTL	SJY715 climb F340		1
	SJY715	Climb F340 SJY715		
10.48	CTL	LNI997 descend to 5000		1
	LNI997	5000 LNI997		
10.49	LNI997	LNI997 clear of weather		
	CTL	LNI997 proceed to BADOK point		
	LNI997	To BADOK point		
10.52	SJY174	SJY174 confirm descend to 10000		
	CTL	Affirm sir, descend and maintain 10000 feet because traffic LNI787 climbing to 9000 feet		1
	SJY174	Copied traffic SJY174, the last clearance descend to initially to 8000 feet before to 6000 sir	1	
	CTL	Roger SJY174 continue to 2000		1
	SJY174	Roger Continue to 200 SJY172		
	CTL	LNI997 turn right h360 clear to ILS report establish		
	LNI997	H360 clear ILS runway 03 call establish LNI997		
10.53	CTL	SJY713 squawk ident 5637		
	SJY713	Identing Squawk 5637 SJY713		
10.54	CTL	LNI997 descend to 2000		1
	LNI997	Descend to 2000 feet LNI997		
10.55	LNI640	Selamat malam Makassar LNI640		
	CTL	LNI640 identified dct to BADOK descend to 4000 vectoring ILS runway 03		1
	LNI640	Descend to 4000 for vectoring ILS 03 die=rect to BADOK		
	GIA679	Makassar radar selamat malam GIA679		
	CTL	GIA679 selamat malam, dct to BADOK expect vectoring for runway 03 continue descend to 12000		1
	GIA679	Dct BADOK descend to 12000 vectoring for runway 03 GIA679		
10.56	CTL	SJY713 traffic passing 4100		
	SJY713	SJY713		
10.57	CTL	GIA632 continue descend to 2000		1
	GIA632	Continue 2000 GIA632		
	CTL	LNI640 recleared descend initials 6000 feet	1	
	LNI640	Descend initials 6000 feet LNI640 and request sequence for landing		
	CTL	LNI640 expect number 2 sir		
	LNI640	Number 2 LNI640		

TIME	PARTY	TURNS	Initials Mark	ATC Instruction
10.58	BTK6269	Makassar good evening BTK6269 joining left H270		
	CTL	BTK6269 good evening identified H270 climb F340 initials	1	
	BTK6269	H270 climb F340 correction F240 BTK6269		
	CTL	BTK6269 climb F340		1
	BTK6269	F340 BTK6269		
	GIA609	GIA609 request highspeed below 10		
	CTL	GIA609 approved		
	GIA609	Highspeed below 10 is approved thank you GIA610		
10.59	BTK6269	BTK6269 clear of weather now		
	CTL	BTK6269 dct MADIN		
	BTK6269	Dct MADIN BTK6269		
11.00	CTL	LNI787 climbing passing F260 contact Ujung 128. selamat terbang		
	LNI787	Contact Ujung 128.3 selamat malam		
	CTL	BTK6183 turn right H360 clear ILS report establish		
	BTK6183	H360 report clear ILS report establish BTK6183		
11.01	Coordination	APP-TWR		
11.02	SJY174	SJY174 reaching 8000 copied traffic insight passing		
11.02	SJY174	MAKASSAR radar SJY174 selamat malam		
	CTL	SJY174 identified proceed to MKS runway 03 continue descend to 6000 feet		1
	SJY173	Continue MKS 03 descend to 6000 SJY174		
11.03	GIA632	GIA632 establish localizer		
	CTL	GIA632 8 miles touch down contact tower 118.1		
	GIA632	Terima kasih		
11.04	CTL	LNI997 descend to 9000 feet		1
	LNI997	9000 feet LNI997		
11.05	CTL	LNI787 traffic on right side 2 o'clock 8 miles maintaining 10000 feet boeng 733		
	LNI787	Roger copied LNI787		
11.06	CTL	GIA609 climbing passing 225 contact ujung 128.3		
	GIA609	128.3 GIA609, terima kasih		
	CTL	CTV348 how many miles maintain Heading		
	CTV348	We are ready now for vector		
	CTL	CTV348 left turn proceed to BADOK point		
	CTV348	Left to BADOK CTV348		
	CTL	SJY174 ready for left turn		
	SJY174	Affirm... standby sir SJY174		
	CTL	SJY174 left H060 clear ILS report Establish		
	SJY174	H060 clear ILS call again establish SJY174		
11.07	CTV332	CTV332 establish localizer 03		
	CTL	CTV332 position 14 miles touch down contact tower 118.1, happy landing		
	CTV332	118.1 thank you happy control		
	CTL	LNI660 climbing passing F250 contact Ujung 132.5		
	LNI660	Roger 132.5 LNI660 thank you good day		
	CTL	Good day		
11.09	CTL	GIA676 climbing passing F285 contact Ujung 128.3		
	GIA676	128.3 GIA676 selamat malam		
	LNI997	LNI997 request for descend		
	CTL	LNI997 descend to 12000		1
	LNI997	Descend to 12000 LNI997		
11.10	SJY174	Makassar SJY174 any chance direct to BADOK		
	CTL	SJY174 direct to BADOK is approved		
	SJY174	Direct to BADOK SJY174		
	BTK6183	Makassar good evening BTK6183 passing 317 to F250		
	CTL	BTK6183 identified proceed to BADOK point runway 03 descend 12000 feet		1
	BTK6183	Thank you BADOK runway 03 descend 12000 BTK6183		
	SJY715	Makassar Radar selamat malam SJY715 squawk 5661 left turn H270		
	CTL	SJY715 identified continue heading climb initials 5000 feet	1	
	SJY715	Climb initials 5000 continue heading SJY715		

TIME	PARTY	TURNS	Initials Mark	ATC Instruction
11.11	LNI997	Reaching 9000 LNI997		
	CTL	LNI997 descend to 6000		1
	LNI997	Descend 6000 LNI997		
11.12	CTL	GIA679 descend to 5000 feet		1
	GIA679	Clear descend to 5000 GIA679		
11.14	CTL	BTK6269 climbing passing F255 contact Ujung 128.3		
	BTK6269	Ujung 128.3 terima kasih selamat malam		
11.15	GIA616	Makassar selamat malam GIA616 Departure passing 1800 H310		
	CTL	GIA616 identifies continue heading climb F340		1
	GIA616	Clear climb F340 maintain heading GIA616		
	CTL	SJY715 direct SIPUT		
	SJY715	Direct to SIPUT SJY715		
	SJY174	SJY174 approaching 8000 copied traffic insight passing		
11.17	CTL	CTV332 continue to 2000 feet via BADOK clear for ILS report establish		
	CTV332	2000 via BADOK clear ILS call again establish CTV332		
	CTL	LNI787 left turn proceed to KOLTA		
	LNI787	To KOLTALNI787		
11.18	BTK6183	BTK6183 established localizer 03		
	CTL	BTK6183 14 miles touch down contact tower 118.1 happy landing		
	BTK6183	118.1 BTK6183 see you departure		
	LNI997	Makassar good evening LNI997 maintaining F240		
	CTL	LNI997 identified proceed to BADOK runway 03 report ready for descend		
	LNI997	Runway 03 proceed to BADOK LNI997 call back for descend		
11.19	CTL	GIA632 turn left H070 clear ILS report establish		
	GIA632	H070 clear intercept ILS call establish GIA632		
	CTL	SJY174 stop descend 8000 feet		
	SJY174	Stop descend to 8000 SJY174		
	CTL	LNI787 reclassified climb initially 7000 due to traffic	1	
	LNI787	Climb initially 10000 confirm?		
	CTL	7000 sir		
	LNI787	7000 we are now passing 8000 sir		
	CTL	ok climb 9000		1
	LNI787	9000 LNI787		
	CTL	SJY174 traffic on right side 1 o'clock will be crossing left to right, descend initials 10000	1	
	SJY174	Roger copied the traffic looking out SJY174		
11.20	CTL	LNI787 continue climb F320		1
	LNI787	Continue climb F320 LNI787		
	CTL	BTK6231 right heading 200 losing altitude		
	BTK6231	Right Heading 200 BTK6231		
11.21	LNI787	Makassar good evening LNI787 departure heading 270 initials 3000	1	
	CTL	LNI787 identified on departure heading 270 climb F320		1
	LNI787	Heading 270 climb F320 LNI787		
	CTV348	CTV348 request heading 090 due to weather		
	CTL	CTV348 heading 090 approved		
	CTV348	Roger heading 090 CTV348		
	BTK6231	BTK6231 ready for left heading 060 clear for ILS report establish		
	BTK6231	Clear for ILS BTK6231		
11.22	LNI997	LNI997 request heading 225 due to weather		
	CTL	LNI997 heading 225 approved		
	LNI997	Thank you sir		
11.23	LNI997	ILS runway 03 LNI997		
	CTL	LNI997 position 11 miles touch down contact tower 118.1 happy landing		
	LNI997	118.1 good night		
	CTL	Good night		
11.24	CTL	SJY174 confirm descending leaving 10000		
	SJY174	Now descending 9000 SJY174		
	CTL	Ok keep visual with traffic descend to 2000 for you sir		1
11.25	CTL	BTK6183 continue to 2000 feet continue heading		1
	BTK6183	Maintain heading descend 2000 BTK6183		
	CTV348	CTV348 established localizer		
	CTL	CTV348 14 miles touch down contact tower 118.1 happy landing		
	CTV348	118.1 jumpa lagi		

TIME	PARTY	TURNS	Initials Mark	ATC Instruction
11.26	CTV348	Makassar selamat malam CTV348		
	CTL	CTV348 selamat malam identified proceed to BADOK runway 03 descend 4000		1
	CTV348	Proceed to BADOK 4000 runway 03 CTV348		
	GIA609	Makassar radar selamat malam GIA609 passing 3000 and directing to MADIN 4000		
	CTL	GIA609 identified direct to MADIN climb initials 5000 feet	1	
	GIA609	Initially 5000 to MADIN GIA609		
	CTL	BTK6231 descend to 6000 feet		1
11.27	GIA632	GIA632 approaching 2000		
	CTL	GIA632 Standby left turn		
	GIA632	Standby GIA632		
11.28	CTL	BTK6183 sequence number 3 traffic number 2 position about 15 miles south of BADOK, sequencing Left H230		
	BTK6183	Left H230 sequence number 3 BTK6183		
	CTV348	CTV348 confirm clear for ILS		
	CTL	CTV348 continue heading descend 2000 clear ILS		1
	CTV348	Roger descend 2000 continue heading clear ILS CTV348		
	LNI660	LNI660 departure 1800		
	CTL	LNI660 identified departure direct GAMAL climb F280		1
	LNI660	Direct GAMAL climb F280 LNI660		
11.29	CTL	SJY589 contact ujung control 128.3		
	SJY289	Contact ujung control 128.3 SJY589		
11.30	LNI787	LNI787 clear of conflict resume navigation 9000		
	CTL	LNI787 climb F320		1
11.31	TWR	SJY176 boleh masuk		
	APP	Line-up and wait		
11.33	BTK6231	Ujung selamat malam BTK6231 f310 request descend		
	CTL	Selamat Malam BTK6231 identified direct to BADOK vectoring ILS runway 03 descend 8000		1
	BTK6231	Descend 8000 BTK6231		
	CTL	GIA676 direct to SIPUT		
	GIA676	Direct to SIPUT GIA676		
11.35	CTL	BTK6231 right heading 200 losing altitude		
	BTK6231	Right heading 2000 BTK6231		
11.37	BTK6231	BTK6231 localizer 03		
	CTL	BTK6231 14 miles touch down contact Tower 118.1 happy landing		
	BTK6231	118.1 selamat malam		
	CTL	SJY174 traffic crossing 12 o'clock 13 miles climbing passing 115 to F340 westbound		
	SJY174	Roger copied the traffic monitor on T-CAS SJY174		
	CTL	SJY174 stop descend 8000 feet		1
11.38	KDI	Ujung LNI997 F240		
	APP	LNI997 F240 approved squawk 5631		
	KDI	5631 terima kasih		
11.39	CTL	SJY174 identified passing 3000 correction 4100		
	SJY713	SJY713		
		Total Instruction Climb/descend	9	33
				42
		Total prosentasi Penggunaan Initials	21%	

## APPENDIX 11

**Data Transcript ATC-Pilot  
Upper Pangkalan Bun Sector (25-12-2019, 23.00-00.00UTC)**

TIME	PARTY	URNS	Initial s Mark	ATC Instruction
23.00.20	CTL	LNI321 contact Jakarta one two five decimal seven		
	LNI321	One two five seven LNI321, selamat pagi		
	CTL	Pagi		
23.03.13	CTL	LNI521 contact one two five decimal niner		
	CTL	LNI521 Ujung		
	JST117	...one seven position TAVIP maintaining FL330 request climb FL350		
	CTL	JST117 standby		
	NIH360	Ujung control NIH360		
	CTL	LNI521 contact one two five decimal niner		
	LNI521	One two five niner LNI521, bye-bye		
	CTL	NIH361 go ahead		
	LNI2660	...level370 over TAVIP point		
	CTL	LNI2660 standby break, NIH360 go ahead		
	CTL	LNI2660 identified maintain 370		
	LNI2660	Maintain 370 LNI2660		
	?	....block		
23.04.20	GIA561	Ujung Selamat pagi assalamualaykum GIA561		
	CTL	GIA561 identified maintain 360		
	GIA561	Maintain 360 GIA561		
23.05.22	??	Ujung..Ujung NIH360 calling you over TAVIP FL370		
	CTL	NIH360 squawk ident please		
	NIH360	NIH360 identing 6651 we are maintaining 240 standbv 280		
	CTL	NIH360 reset transponder..reset transponder 5651 climb 280		1
	NIH360	Transponder 5651 climb 280 NIH360		
	CTL	LNI2660 direct to WILIS		
	LNI2660	WILIS LNI2660		
	CTL	LNI792..LNI792 contact 133 decimal 8		
23.06.24	LNI792	...8 LNI792 good day		
23.06.44	CTL	LNI763 coming up TAVIP contact Jakarta 125 decimal 7		
	LNI763	1257 LNI763 good morning Sir		
23.07.03	CTL	NIH360 direct KOLOT		
	CTL	NIH360 direct KOLOT		
	NIH360	Direct KOLOT NIH360		
	CTL	LNI626 contact 132 decimal 5		
23.07.29	CTL	LNI626 Ujung..		
	LNI626	LNI626		
	CTL	LNI626 contact 132 decimal 5		
	LNI626	LNI626 good day		
	LNI625	Ujung Control Good morning LNI625		
	CTL	LNI625 selamat pagi identified direct alpha november yankee		
	LNI625	direct alpha november yankee LNI625		
23.08.05	CTL	LNI773 contact 125 decimal 9		
	LNI773	contact 125 decimal 9 LNI773		
23.08.52	CTL	JST117 climb 350		1
	JST117	climb FL350 JST117		
23.09.10	GIA611	Ujung GIA611 selamat pagi		
	CTL	GIA611 identified direct MADIN		
	GIA611	MADIN FL340 GIA611		
23.09.40	CTL	LNI2660 continue right turn direct to TIRUS		
	LNI2660	direct TIRUS LNI2660		
23.11.10	CTL	GIA611 continue climb to 360		1
	GIA611	cimb to FL360 GIA611		
	CTL	Ujung control		
23.12.01	LNI310	Ujung LNI310 on squawk 6310		
	CTL	LNI310 identified climb and maintain 270 direct to bravo delta mike		
	LNI310	maintain 270 and direct to bravo delta mike LNI310		

TIME	PARTY	TURNS	Initial s Mark	ATC Instruction
23.00.20	CTL	LNI321 contact Jakarta one two five decimal seven		
	LNI321	One two five seven LNI321, selamat pagi		
	CTL	Pagi		
23.03.13	CTL	LNI521 contact one two five decimal niner		
	CTL	LNI521 Ujung		
	JST117	...one seven position TAVIP maintaining FL330 request climb FL350		
	CTL	JST117 standby		
	NIH360	Ujung control NIH360		
	CTL	LNI521 contact one two five decimal niner		
	LNI521	One two five niner LNI521, bye-bye		
	CTL	NIH361 go ahead		
	LNI2660	...level370 over TAVIP point		
	CTL	LNI2660 standby break, NIH360 go ahead		
	CTL	LNI2660 identified maintain 370		
	LNI2660	Maintain 370 LNI2660		
	?	....block		
23.04.20	GIA561	Ujung Selamat pagi assalamualaykum GIA561		
	CTL	GIA561 identified maintain 360		
	GIA561	Maintain 360 GIA561		
23.05.22	??	Ujung.Ujung NIH360 calling you over TAVIP FL370		
	CTL	NIH360 squawk ident please		
	NIH360	NIH360 identing 6651 we are maintaining 240 standby 280		
	CTL	NIH360 reset transponder..reset transponder 5651 climb 280		1
	NIH360	Transponder 5651 climb 280 NIH360		
	CTL	LNI2660 direct to WILIS		
	LNI2660	WILIS LNI2660		
	CTL	LNI792..LNI792 contact 133 decimal 8		
23.06.24	LNI792	...8 LNI792 good day		
23.06.44	CTL	LNI763 coming up TAVIP contact Jakarta 125 decimal 7		
	LNI763	1257 LNI763 good morning Sir		
23.07.03	CTL	NIH360 direct KOLOT		
	CTL	NIH360 direct KOLOT		
	NIH360	Direct KOLOT NIH360		
	CTL	LNI626 contact 132 decimal 5		
23.07.29	CTL	LNI626 Ujung...		
	LNI626	LNI626		
	CTL	LNI626 contact 132 decimal 5		
	LNI626	LNI626 good day		
	LNI625	Ujung Control Good morning LNI625		
	CTL	LNI625 selamat pagi identified direct alpha november yankee		
	LNI625	direct alpha november yankee LNI625		
23.08.05	CTL	LNI773 contact 125 decimal 9		
	LNI773	contact 125 decimal 9 LNI773		
23.08.52	CTL	JST117 climb 350		1
	JST117	climb FL350 JST117		
23.09.10	GIA611	Ujung GIA611 selamat pagi		
	CTL	GIA611 identified direct MADIN		
	GIA611	MADIN FL340 GIA611		
23.09.40	CTL	LNI2660 continue right turn direct to TIRUS		
	LNI2660	direct TIRUS LNI2660		
23.11.10	CTL	GIA611 continue climb to 360		1
	GIA611	cimb to FL360 GIA611		
	CTL	Ujung control		
23.12.01	LNI310	Ujung LNI310 on squawk 6310		
	CTL	LNI310 identified climb and maintain 270 direct to bravo delta mike		
	LNI310	maintain 270 and direct to bravo delta mike LNI310		

TIME	PARTY	TURNS	Initial s Mark	ATC Instruction
23.00.20	CTL	LNI321 contact Jakarta one two five decimal seven		
	LNI321	One two five seven LNI321, selamat pagi		
	CTL	Pagi		
23.03.13	CTL	LNI521 contact one two five decimal niner		
	CTL	LNI521 Ujung		
	JST117	...one seven position TAVIP maintaining FL330 request climb FL350		
	CTL	JST117 standby		
	NIH360	Ujung control NIH360		
	CTL	LNI521 contact one two five decimal niner		
	LNI521	One two five niner LNI521, bye-bye		
	CTL	NIH361 go ahead		
	LNI2660	...level370 over TAVIP point		
	CTL	LNI2660 standby break, NIH360 go ahead		
	CTL	LNI2660 identified maintain 370		
	LNI2660	Maintain 370 LNI2660		
	?	....block		
23.04.20	GIA561	Ujung Selamat pagi assalamualaykum GIA561		
	CTL	GIA561 identified maintain 360		
	GIA561	Maintain 360 GIA561		
23.05.22	??	Ujung..Ujung NIH360 calling you over TAVIP FL370		
	CTL	NIH360 squawk ident please		
	NIH360	NIH360 identing 6651 we are maintaining 240 standby 280		
	CTL	NIH360 reset transponder..reset transponder 5651 climb 280		1
	NIH360	Transponder 5651 climb 280 NIH360		
	CTL	LNI2660 direct to WILIS		
	LNI2660	WILIS LNI2660		
	CTL	LNI792..LNI792 contact 133 decimal 8		
23.06.24	LNI792	...8 LNI792 good day		
23.06.44	CTL	LNI763 coming up TAVIP contact Jakarta 125 decimal 7		
	LNI763	1257 LNI763 good morning Sir		
23.07.03	CTL	NIH360 direct KOLOT		
	CTL	NIH360 direct KOLOT		
	NIH360	Direct KOLOT NIH360		
	CTL	LNI626 contact 132 decimal 5		
23.07.29	CTL	LNI626 Ujung...		
	LNI626	LNI626		
	CTL	LNI626 contact 132 decimal 5		
	LNI626	LNI626 good day		
	LNI625	Ujung Control Good morning LNI625		
	CTL	LNI625 selamat pagi identified direct alpha november yankee		
	LNI625	direct alpha november yankee LNI625		
23.08.05	CTL	LNI773 contact 125 decimal 9		
	LNI773	contact 125 decimal 9 LNI773		
23.08.52	CTL	JST117 climb 350		1
	JST117	climb FL350 JST117		
23.09.10	GIA611	Ujung GIA611 selamat pagi		
	CTL	GIA611 identified direct MADIN		
	GIA611	MADIN FL340 GIA611		
23.09.40	CTL	LNI2660 continue right turn direct to TIRUS		
	LNI2660	direct TIRUS LNI2660		
23.11.10	CTL	GIA611 continue climb to 360		1
	GIA611	cimb to FL360 GIA611		
	CTL	Ujung control		
23.12.01	LNI310	Ujung LNI310 on squawk 6310		
	CTL	LNI310 identified climb and maintain 270 direct to bravo delta mike		
	LNI310	maintain 270 and direct to bravo delta mike LNI310		

TIME	PARTY	TURNS	Initial s Mark	ATC Instruction
23.31.51	CTL	LNI625 contact 125 decimal 9		
	LNI625	1259 LNI625 good day Sir		
	CTL	good day		
23.32.25	CTV430	Ujung selamat pagi CTV430 squawk 6306		
	CTL	CTV430 identified passing 200 continue climb to FL330 and direct to LASER for LASER one bravo arrival runway 25		1
	CTV430	roger LASER-LASER one bravo runway 25 continue climb 330 initial CTV430	1	
23.33.06	CTL	JST117 contact 120 decimal 7		
	JST117	120 decimal 7 JST117		
	GIA533	good morning Ujung Pandang GIA533		
	CTL	GIA533 identified continue climb FL340		1
	CTL	GIA533 I say again continue climb 340		
23.33.47	CTL	GIA533 Ujung		
	GIA533	GIA533 Go ahead		
	CTL	GIA533 I say again climb 340-climb 340		
	GIA533	340		
23.34.16	AWQ550	Selamat pagi AWQ550 FL340		
	CTL	AWQ550 identified		
23.34.30	AWQ550	AWQ550 can climb higher sir?		
	CTL	standby		
23.34.44	CTL	GIA533 for spacing tum left heading 240		
	GIA533	Left heading 240 GIA533		
23.35.01	NIH242	Ujung good morning NIH242		
	CTL	NIH242 identified climb and maintain FL320		1
	NIH242	FL280 final level		
	CTL	NIH242 roger climb and maintain 280 final		
	NIH242	280 NIH242		
23.35.52	CTL	QTR964 for radar spacing tum right heading 160		
	QTR964	Heading 160 QTR964		
23.36.20	CTL	RBA796 continue climb 390		1
	RBA796	level 390 RBA796		
23.36.57	AWQ502	control AWQ502 maintain FL380 direct to SUMDI		
	CTL	AWQ502 roger direct to SUMDI		
23.37.30	CTL	GIA604 contact 120 decimal 7		
	GIA604	good day GIA604		
23.37.45	NIH172	Ujung NIH172 selamat pagi		
	CTL	NIH172 selamat pagi identified		
	NIH172	NIH172 and request any chance request direct sierra papa tango		
	CTL	NIH172 after TAVIP direct sierra papa tango approved		
	NIH172	TAVIP direct sierra papa tango NIH172		
	GIA550	Ujung control GIA550 FL350		
	CTL	GIA550 report ready for descend		
	GIA550	ready descend GIA550		
23.38.29	CTL	QTR964 now tum left direct to BATUR		
	QTR964	direct to BATUR QR964		
	CTL	BTK6267 contact 125 decimal 9		
	BTK6267	1259 BTK6267 good day		
23.39.46	CTL	BTK6288 contact 120 decimal 7		
	BTK6288	1207 BTK6288 good day		
23.41.03	TGN712	TGN712 ready for descend		
	CTL	TGN712 descend 250		1
	TGN712	clear descend 250 TGN712		
23.41.46	CTV430	Ujung CTV430 approaching 330 request higher FL370		



TIME	PARTY	TURNS	Initial s Mark	ATC Instruction
23.41.59	CTL	CTV433 confirm?		
	CTV430	this 430		
	CTL	CTV430 for higher contact 133 decimal 8		
	CTV430	133 decimal 8 CTV430 thank you good day assalamualaykum		
	CTL	BTK6288 Ujung		
	?	direct sierra papa tango		
	CTL	station calling say again		
	NIH242	NIH242		
	CTL	NIH242 direct sierra papa tango approved		
	NIH242	roger NIH242		
	CTL	QTR964 contact 120 decimal 7		
	QTR964	120 decimal 7 QTR964		
	CTL	TGN712 contact Pangkalan Bun 122 decimal 2 identification terminated		
	TGN712	contact 122 decimal 2 TGN712 thank you		
	CTL	GIA533 turn right direct to SPIKO		
	GIA533	direct to SPIKO GIA533 FL340 terima kasih		
	CTV484	Ujung selamat pagi CTV484		
	CTL	CTV484 identified climb FL270		1
	CTV484	climb 270 CTV484		
	CTV785	Ujung CTV785		
	CTL	CTV785 identified direct to LASEM		
	CTV785	LASEM CTV785		
	GIA530	Ujung GIA530 request descend		
	CTL	GIA530 descend 250		1
	GIA530	descend FL250 GIA530		
23.44.11	CTL	CAL752 contact Jakarta 125 decimal 7		
	CAL752	1257 for Jakarta CAL752 good day		
23.46.22	CTL	GIA530 10 miles west of DUNIA descending 285 lower contact Banjar 120 decimal 5 identification terminated		
	GIA530	Contact Banjar 126 decimal 5 GIA530 good day		
	CTL	Good day		
23.46.51	CTL	AWQ324 12 miles south east of TAVIP contact Jakarta 125 decimal 7		
	AWQ324	AWQ324 terimakasih selamat pagi		
	CTL	Pagi		
23.48.31	LNI320	Jakarta...Ujung LNI320 request descend		
	CTL	LNI320 descend level 250		1
	LNI320	FL250 LNI320		
23.48.52	NIH172	NIH172 request descend		
	CTL	NIH172 descend 250		1
	NIH172	250 NIH172		
23.49.57	AWQ392	Ujung control AWQ392 selamat pagi climbing passing level to 190 squawk 7006		
	CTL	AWQ392 identified continue climb to FL360 direct SUMDI		1
	AWQ392	Climb level 360 request direct TAVIP AWQ392		
	CTL	AWQ392 for spacing via SUMDI first		
	AWQ392	Copied climb level 360 direct SUMDI AWQ392		
	LNI726	Ujung selamat pagi LNI726		
	CTL	LNI726 identified direct SOLOM		
	LNI726	SOLOM LNI726		
23.51.29	CTL	AWQ550 for spacing turn right heading 340		
	AWQ550	340 AWQ550		
	AWQ550	AWQ550 confirm heading 340?		
	CTL	AWQ550 affirm heading 340		
	AWQ550	Heading 340 AWQ550		
	NIH172	NIH172 approaching 250		
	CTL	NIH172 further lower contact Pangkalan Bun 122 decimal 2 identification terminated		
	NIH172	Contact Pangkalan Bun 122 decimal 2 NIH172 terimakasih		
23.52.16	CTL	LNI320 coming up 250 passed DUNIA lower contact Banjar 126 decimal 5 identification terminated		
	LNI320	1265 LNI320 good day Sir		
	CTL	Good day		

TIME	PARTY	TURNS	Initial s Mark	ATC Instruction
23.52.40	CTL	AWQ550 traffic one o'clock crossing track right to left 35 miles maintaining 340 Boeing 738 south west bound		
	AWQ550	looking out for the traffic AWQ550		
23.53.03	CTL	RBA796 contact 132 decimal 5		
	RBA796	contact 132 decimal RBA796		
	CTL	Ujung control		
23.54.34	CTL	AWQ550 now turn left direct to TAVIP		
	AWQ550	TAVIP AWQ550		
23.55.09	GIA550	GIA550 request descend		
	CTL	GIA550 descend 250		1
	GIA550	GIA550		
23.55.37	CTL	AWQ392 now direct TAVIP		
	AWQ392	Direct TAVIP AWQ392		
23.56.14	BTK7271	Assalamualaykum Ujung BTK7271 FL370 over TAVIP		
	CTL	BTK7271 identified coming up TAVIP cleared to Balikpapan via SILJA one bravo runway 25		
	BTK7271	to follow SILJA one bravo for runway 25 BTK7271		
	CTV484	Ujung CTV484 request descend		
	CTL	CTV484 descend 250 and further lower contact Banjar 126 decimal 5 identification terminated		1
	CTV484	descend 250 126 decimal 5 CTV484		
23.57.59	NIH242	NIH242 ready for descend		1
	CTL	NIH242 descend 250		
	NIH242	descend 250 NIH242		
23.58.46	CTL	NIH242 contact Banjar 126 decimal 5 identification terminated		
	NIH242	Banjarmasin or Iskandar?		
	CTL	NIH242 contact Banjar 126 decimal 5 identification terminated		
	NIH242	Banjarmasin 1265 good day		
	CTL	good day		
	CTL	GIA550 contact Pangkalan Bun 122 decimal 2 identification terminated		
	GIA550	contact 122 decimal 2 Pangkalan Bun GIA550 good day		
23.59.46	BTK6561	Control selamat pagi BTK6561		
	CTL	BTK6561 identified		
00.00.08	LNI667	Control LNI667 selamat pagi squawk 5604		
	CTL	LNI667 identified direct LASEM		
	LNI667	LASEM LNI667		
			3	26
		Total Instruction Climb/descend		29
		Prosentase Pneggunaan Initial	10%	

## APPENDIX 12

**Data Transcript ATC-Pilot  
Upper Bali Sector (25-12-2019, 05.00-06.00UTC)**

TIME	PARTY	TURNS	Initials Mark	ATC Instruction
2019-12-25 05.02.11,867	GIA430	GIA430 request descend		
	CTL	GIA430 descend F290		1
2019-12-25 05.03.00,617	CTL	GIA430 continue descend F250		
	GIA430	Continue descend F250 GIA430		
	CTL	LNI022 report clear of weather		
	LNI022	Report clear of weather LNI022		
	CTL	LNI022 roger continue Entas 3 Bravo arrival		
	GIA446	GIA446 request fly heading 275 avoiding weather		
	CTL	GIA446 heading 275 is approved, report clear of weather		
	GIA446	GIA446 copied		
	AWQ8455	Ujung AWQ8455 request descend		
	CTL	AWQ8455 descend F290 initials	1	
	AWQ8455	Cleared descen F290 initials AWQ8455		
2019-12-25 05.06.14,030	CTL	SIA943 continue climb F340 final level		1
	SIA943	continue climb F340 SIA943		
2019-12-25 05.07.35,330	CTL	CTV195 contact Ujung 125.9		
	CTV195	Contact Ujung 125.9 CTV195, thank you ma'am bye		
	CTL	SIA943 contact Ujung 134.1		
	SIA943	134.1 SIA943		
2019-12-25 05.07.35,330	MAS714	Ujung MAS714 climbing level 240 passing level 205		
	CTL	MAS714 Ujung identified, climb initials F280 and present position cleared direct to SIPUT	1	
	MAS714	Climb F280 MAS714 nd request direct to BATUR first due to		
	CTL	MAS714 proceed to BATUR is approved		
	MAS714	Roger MAS714		
2019-12-25 05.07.49,850	CTL	LNI657 contact Ujung 125.9		
2019-12-25 05.08.58,010	CTL	Station calling say again your callign		
2019-12-25 05.11.39,863	SIA943	Bali SIA943		
2019-12-25 05.13.43,973	GIA446	GIA446 clear weather request direct LASEM		
	CTL	GIA446 cleared direct LASEM		
2019-12-25 05.14.07,343	CTL	AWQ8455 after ENTAS proceed to SIPUT		
	AWQ8455	After ENTAS proceed to SIPUT AWQ8455 thanks Ma'am		
2019-12-25 05.14.55,373	CTL	CTV195 clear climb F340 initials	1	
	CTV195	F340 CTV195		
	CTL	CTV195 traffic 1 o'clock 18 miles separation maintaining F330		
	CTV195	Roger looking up the traffic CTV195		
	CTL	THA431 present position direct SIPUS and descend F200		
	THA431	Direct SIPUS F200 THA431		
	CTL	Traffic right side 10 miles climbing passing F320 to F340		
	GIA430	GIA430 copied traffic		
2019-12-25 05.15.04,313	CTL	AWQ8455 traffic 1 o'clock 30 miles climbing passing F330 to F340		
	AWQ8455	AWQ8455 is looking out traffic C		
	CTL	CTV195 continue climb F380 and expdite cross F360		1
	CTV195	Continue climb F380 expedite F360 and confirm maintain Heading 280 CTV195?		
	CTL	CTV195 affirm		
	CTV195	Roger maintaining H280 CTV195		
2019-12-25 05.15.04,313	SIA943	SIA943 clear of weather direct SUMDI		
	CTL	SIA943 clear direct SUMDI		
	SIA943	SIA943		
2019-12-25 05.16.12,683	SIA943	SIA943 right heading 330		
	CTL	SIA943 heading 330 approved report clear of weather		
	SIA943	SIA943		
	AWQ8455	Control selamat siang AWQ8455 F330		
	CTL	AWQ8455 Ujung I identified, Entas3 Bravo arrival runway 27		
	AWQ8455	Entas3 Bravo arrival runway 27, AWQ8455		
2019-12-25 05.16.38,363	CTV195	CTV195 clear of weather		
	CTL	CTV195 cleared direct to MADIN		
	CTV195	Cleared direct to MADIN CTV195		
2019-12-25 05.16.38,363	CTV195	CTV195 reaching F320 standby higher		
	CTL	CTV195 standby higher		
	CTV195	Standby higher CTV195		
	SIA943	Request further right 340		
	CTL	SIA943 Heading 340 approved		
	CTL	CTV195 confirm abble fly heading 280		
	CTV195	We are on heading 280 Ma'am CTV195		
	CTL	CTV195 heading 280 and standby for higher		
	CTV195	Standby higher CTV195		
	GIA446	Ujung GIA446		
	CTL	GIA446 Ujung identified climb F280 report clear weather		1
	GIA446	Report clear of weather and We maintain this heading until 40 miles ahead Ma'am		

2019-12-25 05.17.09,683	CTL	LNI657 present position direct to MADIN	
	LNI657	Present position direct to MADIN LNI657	
	SIA943	SIA943 request heading 305	
	CTL	SIA943 heading 305 is approved	
	SIA943	SIA943	
2019-12-25 05.18.03,443	CTL	Bali Ujung	
	Bali	Request higher GIA446	
	CTL	GIA446 bisa 280	
	Bali	280 Terima kasih	
2019-12-25 05.19.15,443	THA431	THA431 request descend	
	CTL	THA431 descend F250	1
	THA431	Descend F250 THA431	
2019-12-25 05.19.33,447	GIA452	Ujung Control GIA452 maintainig F370 squawk 2353	
	CTL	GIA452 Ujung identified, after SBR clear direct LBJ	
	GIA452	After SBR clear direct LBJ GIA452	
	THA431	Ujung THA431 good afternoon F370 direct to KOLTA	
	CTL	THA431 Ujung identified follow TIRAS 2 Delta Arrival runway 27	
	THA431	Follow TIRAS 2 Delta Arrival runway 27 THA431	
	CTV195	Ujung good afternoon CTV195 on squawk 4447 tracking to LUWAK climbing 240 now passing 220	
	CTL	CTV195 ujung identified climb initial F320 proceed direct SBR	1
	CTV195	F320 and proceed to SBR CTV195	
2019-12-25 05.20.45,927	CTV195	Ujung CTV195 weather deviation required Headingfly 325 until 25 right of track	
	CTL	CTV195 heading 325 approved report clear of weather	
	CTV195	Approved CTV195	
	GIA430	Ujung GIA430 F330	
	CTL	GIA430 Ujung identified	
	GIA430	GIA430	
2019-12-25 05.21.29,247	LNI657	LNI675 approaching F300	
	CTL	LNI675 continue climb F360	1
	CTL	Continue climb 360 LNI657	
	CTL	LNI692contact Ujung on 128.3	
	LNI692	Ujung on 128.3 terima kasih	
	CTL	BTK6130 contact Ujung on 133.8	
	CTL	BTK6130 contact Ujung on 133.8	
	BTK6130	Confirm for BTK6130 133.8?	
	CTL	BTK6130 affirm	
2019-12-25 05.22.18,057	CTL	BTK6284 contact Ujung Control 133.8	
	BTK6284	133.8 BTK6284 terima kasih wasalamualaikum	
2019-12-25 05.22.34,617	CTL	LNI031 contact Ujung 125.9	
	LNI031	125.9 LNI031, good day Ma'am	
	CTL	Good day	
2019-12-25 05.22.50,787	CTL	CTV306 confirm calling Ujung?	
	CTL	CTV306 Ujung	
	CTV306	Ujung CTV306 squawk 5657 requesting descend	
	CTL	CTV306 identified descend F250	1
	CTV306	Descend F250 CTV306	
	LNI657	Ujung LNI657	
	CTL	LNI657 maintain 240 for a while Sir due to traffic	1
	LNI657	240 LNI657	
	CTL	LNI657 when able direct to CUCUT	
	LNI657	Roger direct to CUCUT LNI657	
	VJT893	Ujung VJT893 request further descend	
	CTL	VJT893 descend to F250	1
	VJT893	Descending F250 VJT893	
	CTL	CTV444 Ujung	
	CTV444	Go ahead CTV444	
	CTL	CTV444 descend F250 initials, F250 initials, turn right heading 180	1
	CTV444	Turn left heading 180 CTV444	
	CTL	CTV you have traffic turn left 180 descend F250	1
	CTV444	Yes Sir We descend to F250 and heading 180 CTV444	
	MYU178	MYU178 maintaining 300	
	CTL	MYU178 roger contact Ujung Control 134.1	
	MYU178	!34.1 MYU178	
	AWQ462	Ujung AWQ462	
	CTL	AWQ462 passed traffic descend F190	1
	AWQ462	Descend 190 AWQ462	
	CTL	LNI657 continue climb to F310...sorry 300	1

TIME	PARTY	TURNS	Initials Mark	ATC Instruction
	LNI657	Climb initial F300 LNI657		
	CTV444	Approaching F250		
	CTL	VJT893 contact Bali 119.3		
	VJT893	Contact Bali 119.3 thank you and good day VJT893		
	AWQ462	AWQ462 request lower		
	CTL	AWQ462 lower contact Bali 119.9		
	AWQ462	199.9 AWQ462		
	CTL	CTV306 cocontact Surabaya on 124.0		
	CTV306	Roger 124.0 CTV306 good day		
	CTL	BTK6284 contact Ujung Control 133.8		
	BTK6130	BTK6130 heading 085		
	CTL	CTV444 direct to TAWES, direct to TAWES, contact Bali 119.9		
	CTV444	119.9 TAWES CTV444		
2019-12-25 05.24.27,327	CTL	GIA264 Ujung		
	CTL	Descend F250 for spacing turn right heading 210		1
	CTV444	Heading 210 and descend F250 CTV444		
	CTL	LNI692 continue climb F330		1
	CTV306	Ujung CTV306 5657		
	CTL	AWQ551...AWQ551 contact Bali 118.3		
SC-DBVL-B01_B9EC23AE-043E	LNI031	Ujung selamat siang this LNI031		
	CTL	VJT893 standby, MYU178 climb 300 initials	1	
	MYU178	F300 initials MYU178		
	LNI692	Ujung LNI 692 clear weather selamat siang		
	CTL	Station Ujung standby for weather		
	CTL	VJT893 descend to F310 initials	1	
	VJT893	F310 initials leaving F350 now VJT893		
	CTL	LNI692 identified continue climb to F330		1
	SCO284	Ujung control SCO284 request descend heading 285		
	CTL	SCO284 contact Bali 119.3		
	CTV444	CTV444 selamat siang ready for descend		
	CTL	CTV444 identified descend to F250		1
	AWQ462	AWQ462 request lower		
	CTL	AWQ463 standby		
	LNI031	LNI031 request higher maintaining F240		
	CTL	LNI031 climb F360		1
	LNI031	Climb F360 request direct to LASEM		
	CTL	Direct to LASEM Approved Sir		
	AWQ551	AWQ551 maintaining F300		
	CTL	AWQ551 continue descend F250, contact Bali 119.3		1
	AWQ551	F250 selamat siang		
	LNI692	Ujung LNI692		
	CTL	LNI692 continue climb F330		1
	AWQ462	Ujung AWQ462 request lower		
	CTL	Maintain F250 initials due to traffic opposite direction	1	
	AWQ462	Roger		
	AWQ941	Ujung AWQ941 maintaining F320 request higher level		
	CTL	AWQ941 contact ujung 125.9		
20200109073334247_MATS C-DBVL-A01_133E3CE1-5C60- 4B1E-B389-	LNI692	Ujung LNI692		
	CTL	LNI692 standby		
	CTL	AWQ462 descend F250		1
	AWQ462	Descend F250 AWQ462		
	CTL	GIA264 descend to F250		
	GIA264	F250 GIA264		
	CTL	BTK6284 climb F370		1
	BTK6284	Climb F370 report ready for descend BTK6284		
20200109073334247_MATS C-DBVL-A01_9605AEAF- 39D0-466A-9A7E-	CTL	AWQ941 climb to F320 initials	1	
	CTL	GIA264 fly heading 130		
	GIA264	Heading 130		
	CTL	AWQ941 climb to F320 final		1
	AWQ941	F320 final AWQ941		
	MYU178	Ujung MYU178		
20200109073334247_MATS C-DBVL-A01_DFE75927- 31E9-4997-BDE5-	SCO284	SCO284 req heading 130 to avoid		
	CTL	SCO284 heading 160 approved		
	AWQ551	AWQ551 req descend		
	CTL	AWQ551 descend to F300 initials	1	
	AWQ551	Initials F300 AWQ551		
	CTL	MYU178 Ujung, fly heading 305 Climb F320		1
	MYU178	Climb 320 H305 MYU178		

TIME	PARTY	TURNS	Initials Mark	ATC Instruction	
20200109073334247_MATS C-DBVL-B01_F96BD61E-36C2-4403-BAC3-	AI C301	Ujung AI C301 req heading 310 due to weather			
	CTL	AI C301 heading 310 approved			
	AI C301	H301 approved AI C301			
	AWQ941	AWQ941 track to CUCUT			
	CTL	AWQ941 dct to CUCUT			
	CTL	SCO284 descend to F250 observe traffic on your left side 9 o'clock		1	
	SCO284	Descend to F240 and say again for the turn			
	CTL	SCO284 descend to F250			
20200109073334247_MATS C-DBVL-B01_972C6811-28ED-49C8-ADAE-	SCO284	Descend to F250 SCO284			
	AWQ551	Ujung AWQ551 due to wx a head request left via ENTAS			
	CTL	AWQ551 proceed direct to ENTAS			
	AWQ551	AWQ551			
	AWQ941	Ujung AWQ941 we are unable direct to CUCUT due to weather req H310 avoid wx			
	CTL	AWQ941 H310 approved			
	AWQ	Thanks Sir H310 climb F360 AWQ941			
	SCO284	Ujung Control SCO284 F370			
20200109073334247_MATS C-DBVL-B01_D0AEACD-0345-403F-B83E-	CTL	SCO284 identified maintain F370 proceed direct to BATUR			
	SCO284	Dct to BATUR and request Descend			
	SCO284	SCO284 req descend			
	CTL	SCO284 your traffci opposite direction maintaining 360, confirm able H160?			
	SCO284	We can H155			
	20200109073334247_MATS C-DBVL-A01_540E118C-61CA-4AF1-8743-2F5704692890	CTL	AI Q397 contact ujung 134.1		
		AI Q397	UJUNG 134.1 good day AI Q397		
		CTL	CTV697 contact Surabaya on 124.0		
CTV697		Contact Surabaya 124.0 CTV697			
CTL		AWQ611 confirm clear of weather?			
AWQ611		Affirm			
CTL		AWQ611 direct to MADIN			
AWQ611		DCT to MADIN AWQ611			
CTL		AWQ941 proceed dct to CUCUT			
AWQ941		To CUCUT AWQ941			
XAX219		Control XAX219 good afternoon F380 establish CPDLC			
CTL		XAX219 identified continue CPDLC			
XAX219		CPDLC and we dct RAMPY			
GIA264		Ujung GIA264 selamat siang			
CTL	GIA264 selamat siang report ready for descend				
20200109073334247_MATS C-DBVL-B01_2924CF0-D33A-4FED-A91E-	GIA264	Report ready for descend GIA264			
	CTL	AWQ551 proceed dct to SIDAT			
	AWQ551	To SIDAT AWQ551 thank you			
	CTL	AWQ941 report heading			
	AWQ941	Req H310			
	CTL	AWQ941 H310 approved climb to F 360 initials	1		
	AWQ941	F360 AWQ941			
	20200109073334247_MATS C-DBVL-A01_2031653B-8846-4B2F-BB9C-59252A7F2B14	CTV697	Ujung CTV697 request		
CTL		CTV697 go ahead for request			
CTV697		Requesting H320 to avoid weather			
CTL		CTV697 H320 approved			
CTV697		CTV697			
AWQ551		Ujung AWQ551 selamat siang Maintaining 370 on H115 we are now clear of WX			
CTL		AWQ551 ujung identified maintain F370 dct to ENTAS			
AWQ551		ENTAS maintianing F370 AWQ551			
20200109073334247_MATS C-DBVL-A01_BFBFE6AE-2B6F-44B1-95D9-E41B2D6451C7	AWQ611	Ujung AWQ611 req H295			
	CTL	AWQ611 H295 approved			
	AWQ611	AWQ611			
20200109073334247_MATS C-DBVL-A01_C7851B5D-6C13-41F3-AA7D-	GIA430	GIA430 req descend			
	CTL	GIA430 descend F290			
	GIA430	descend F290 GIA430			

20200109073334247_MATS C-DBVL-A01_D0F08AB7- BD1C-42AB-B07C-	SIA256	SIA256 req 20 right		
	CTL	20 right of track approved SIA256		
	SIA256	20 right of track approved SIA256		
	CTL	SIA278 contact ujung 134.1		
20200109073334247_MATS C-DBVL-A01_E40D9BA7- CC90-4770-A5D8-	CTL	AIQ397 continue climb F340		
	AIQ397	Continue climb F340 AIQ397		1
	AWQ8941	Ujung AWQ8941 approaching 240 H310 req higher		
	CTL	AWQ8941ujung control identified continue climb F380		1
	AWQ8941	F380 AWQ8941		
	CTL	AXM376 contact Bali 119.3		
	AXM376	119.3 AXM376, selamat siang Pak		
CTL	Met Siang			
20200109073334247_MATS C-DBVL-A01_7791C0DB- 6AD0-4078-98E0-	CTL	AXM376 once clr of wx dct to SIPUS		
	AXM376	Once clr of wx we trck dct to SIPUS and req descend Pak AXM376		
	CTL	AXM376 descend to F330 initially	1	
	AXM376	Leave F350 descending F330 due to traffic below		
	CTV697	Ujung CTV697 passing 305		
	CTL	CTV697 identified H290 climb F280		1
CTV697	H290 climb F280 CTV697			
20200109073334247_MATS C-DBVL-A01_735571BC-2537- 4A21-BA2C-1CDD78BCF26F	CTL	MXD325 contact ujung 134.1		
	MXD325	134.1 MXD325		
	AWQ462	AWQ462 selamat siang F350 heading ENTAS		
	CTL	Selamat siang AWQ462 proceed dct to AGUNG		
	AWQ462	Dct AGUNG AWQ462		
	BTK6130	Ujung selamat siang BTK6130		
	CTL	Selamat siang BTK6130 Ujung Control identified continue climb F350		1
	BTK6130	Continue Climb F350 BTK6130		
	AXM376	AXM376 clr of tfc req lower		
	CTL	AXM376 descend to F250		1
AXM376	Descend F250 AXM376			
20200109073334247_MATS C-DBVL-B01_152043BA- D36A-4B4A-822C-	CTL	AIQ397 climb F320 initially	1	
	AIQ397	AIQ397 Confirm F320?		
	CTL	Affirm climb F320 initially		
	AIQ397	F320 intially and clear of wx		
	CTL	Clr of wx AIQ397 proceed dct PKN		
	AIQ397	Proceed PKN AIQ396		
	CTL	LNI 736 contact Ujung 133.8		
LNI 736	Ujung control 133.8			
20200109073334247_MATS C-DBVL-B01_19931146-9621- 4255-B6A3-EAC79D31B44	BTK7334	BTK7334 F360 any chance dct to MADIN		
	CTL	BTK7334 proceed dct to MADIN cimb F380		1
	BTK7334	Climb F380 proceed to MADIN BTK7334		
	SIA238	Ujung SIA238 maintaining F360 currently offset up to 20 mile left due to wx		
	CTL	SIA238 identified 20 Left continue CPDLC		
SIA238	Continue CPDLC SIA238			
20200109073334247_MATS C-DBVL-A01_0317806A-4A98- 4B7B-8602-F7A5B87014D7	BTK7334	BTK7334 standby higher F380		
	CTL	BTK7334 standby higher		
	BTK7334	Standby higher BTK7334		
	AIQ397	AIQ397 requesting H345 due to wx		
	CTL	AIQ397 H345 approved		
	AIQ397	H345 approved AIQ397		
	CTL	MYU325 contact Ujung 134.1		
	MYU325	Good day		
	AIC301	Ujung good morning AIC301 F380 heading 310 due to weather		
	CTL	AIC310 ujung identified H310 approved continue CPDLC		
	AIC301	Continue CPDLC AIC301		
	AXM376	Ujung AXM376 request H110 now due to wx		
	CTL	AXM376 H110 is approved		
	AXM376	thanks pak		
	CTI	SIA278 proceed dct to TAVIP		
	SIA278	Dct to TAVIP SIA278		
SIA939	SIA939 approacing F320			
CTL	SIA939 for higher level contact ujung 134.1			
SIA939	134.1 SIA939			

TIME	PARTY	TURNS	Initials Mark	ATC Instruction
	GIA404	Dct SIPUS 119.3 GIA404		
	AIC301	Ujung AIC301 clr wx dct RAMPY		
	CTL	AIC301 Dct RAMPY		
L-A01_E4CC88FC-D27A-40CE-A	CTL	AWQ611 Fly on H300		
	AWQ611	Confirm AWQ611 H300?		
	CTL	AWQ611 affirm H300 due to traffic		
	AWQ611	H300 AWQ611		
20200109073334247_MATS C-DBVL-B01_3B1FEE14-AC31- 47CF-98B3-26E4E7BA5E0D	AIQ397	AIQ397 requesting H335 due to wx		
	CTL	AIQ397 say again for heading		
	AIQ397	H335 due to wx AIQ397		
	CTL	H335 confirm?		
	AIQ397	Afirm		
SC-DBVL-A01_53710D94-C566	CTL	AIQ397 Ujung identified continue climb to F340 initially	1	
	AIQ397	Climb F320 AIQ397		
	LNI736	LNI736 clr of wx		
	AIQ397	AIQ397 confirm F320		
	CTL	GIA404 fly on H100		
	GIA404	Fly on H100 GIA404		
	AIQ397	AIQ397 Confirm F320?		
	CTL	AIQ397 climb F340		
	AIQ397	Climb F340 AIQ397		
TSC-DBVL-A01_74994BEC-3B1E	LNI736	LNI736 clr of wx		
	CTL	LNI736 DCT KASOL		
	LNI736	Dct KASOL LNI736		
SC-DBVL-A01_4302391D-1578	MYU325	MYU325 req final level 380		
	CTL	MYU325 maintain F320 final		1
	MYU325	MYU325		
SC-DBVL-A01_F0EF308B-7B43	GIA404	Ujung GIA404 req descend		
	CTL	GIA404 descend to F260 initially	1	
	GIA404	Descend to F260 GIA404		
	AWQ611	Ujung AWQ611 F240 stanby higher and req maintain H290		
	CTL	AWQ611 climb F360 H290		
	AWQ611	Continue F360 H290 AWQ611		
TSC-DBVL-B01_695ED36F-BEBC	LNI177	Ujung LNI177 ready for descend		
	CTL	LNI177 descend to F250		1
	LNI177	Descend to F250 LNI177		
	CTL	LNI177 contact Surabaya on 124.0		
	LNI177	Surabaya 124.0 good day Sir		
	CTL	Good day		
TSC-DBVL-A01_106AD763-049C	BTK7334	BTK7334 req H300		
	CTL	BTK7334 H300 approved		
	BTK7334	BTK7334		
TSC-DBVL-A01_C0024B5C-E766	SIA939	Ujung SIA939 req dct to SUMDI		
	CTL	SIA939 dct to SUMDI		
	SIA939	Dct to SUMDI SIA939		
	CTL	GIA407 contact Ujung Control on 125.9		
	GIA407	Contact Ujung on 125.9 GIA407 good day		
	CTL	Good day		
			15	32
		Total Instruction Climb/descend		47
		Total prosentasi Penggunaan Initials	32%	



## APPENDIX 13

**Data Transcript ATC-Pilot  
Upper Bali Sector (25-12-2019, 23.00-00.00UTC)**

TIME	PARTY	TURNS	Initials mark	ATC Instruction
23.00.13	LNI038	Ujung LNI038 selamat pagi squawk 2413		
	CTL	LNI038 selamat pagi Ujung identified direct KADAL		
	LNI038	roger direct KADAL LNI038		
23.00.47	CTL	LNI654 contact Bali 119 decimal 7		
	LNI654	contact Bali 119 decimal 7 LNI654 terimakasih mbak		
	CTL	sama-sama		
23.01.20	LNI038	Ujung LNI038 request descend		
	CTL	LNI038 descend FL250		1
	LNI038	Descend level 250 LNI038		
23.01.48	CTL	GIA368 contact Ujung 120 decimal 7		
	GIA368	Contact Ujung control 1207 GIA368		
	CTL	LNI708 contact Ujung 133 decimal 8		
	LNI708	1338 LNI708		
	GIA368	GIA368 on 1207		
	CTL	GIA368 Ujung identified		
	LNI708	Ujung ujung LNI708		
	CTL	LNI708 Ujung identified		
	LNI708	LNI708		
23.04.20	GIA368	GIA368 if traffic permit request cancel altitude constraint for STAR Surabaya		
	CTL	Station calling Ujung say again		
	GIA368	GIA368 Sir, request cancel altitude constraint for STAR Surabaya		
	CTL	GIA368 Stand by		
	GIA368	Standing by GIA368		
	GIA631	Ujung GIA631 selamat pagi		
	CTL	GIA631 identified climb level 330		1
	GIA631	Ujung GIA631 please say again?		
	CTL	GIA368 cancel altitude constraint approved		
	GIA368	Cancel altitude constraint approved GIA368 thank you Sir		
	CTL	LNI038 passing 290 further clearance contact Bali 119 decimal 7		
	GIA631	Ujung selamat pagi GIA631		
	CTL	GIA631 identified climb level 310 initial	1	
	GIA631	climb FL310 initial GIA631		
	23.06.37	CTV680	Ujung selamat pagi CTV680	
CTL		CTV680 pagi identified direct KADAL report descend runway 09		
CTV680		Call you descend runway 09 CTV680		
GIA897		Ujung GIA897 selamat pagi level 330		
CTL		GIA897 identified maintain level 320 Bali runway 09		
23.07.52	GIA897	maintain 320 Bali runway 09 GIA897		
	GIA897	GIA897 request descend		
	CTL	GIA897 descend level 250		1
23.08.59	GIA897	Descend 250 GIA897		
	CTV680	Ujung CTV680 request descend		
	CTL	CTV680 descend level 250		1
23.10.01	CTV680	clear to leave CTV680		
	CTL	GIA631 climb level 330		1
	GIA631	Climb FL330 GIA631		
	CEB279	CEB279 maintaining FL360 squawk 2701		
	CTL	CEB279 identified maintain level 360 Bali runway 09 GALKO 3 charlie		
	CEB279	maintain FL360 and Bali runway 09 GALKO 3 charlie CEB279		
	AWQ463	and Ujung AWQ463 squawk 6640		
	CTL	AWQ463 identified climb level 360 for spacing traffic initial heading 290 for 40 miles then track direct to SUMDI	1	
	AWQ463	Say again for AWQ463		
	CTL	AWQ463 fly heading 290 climb level 360		1
AWQ463	Fly heading 290 climb level 360 AWQ463			
23.10.01	GIA368	GIA368 request descend		
	CTL	GIA368 stand by, GIA368 descend level 250		1

TIME	PARTY	TURNS	Initials mark	ATC Instruction
23.11.49	CTL	GIA897 descend level 150		1
	GIA897	150 GIA897		
	GIA401	Morning Ujung GIA401		
	CTL	Confirm GIA401?		
	GIA401	Yes sir good morning climbing to FL240		
	CTL	GIA401 identified climb level 360		1
	GIA401	Climb FL360 GIA401		
23.13.27	CTL	GIA368 further clearance contact 125 decimal 1		
	GIA368	Surabaya 1251 GIA368		
	CTV680	CTV680 approaching 250		
	CTL	CTV680 further clearance contact Bali 119 decimal 7		
	CTV680	CTV680 makasih pak		
23.13.27	LNI011	Ujung selamat pagi LNI011 on squawk 4403 climb climb 240 heading to RABOL		
	CTL	LNI011 identified climb 340		1
	LNI011	Climb level 340 LNI011 stand by direct LASEM traffic permit		
	CTL	standby for direct route sir direct to RABOL first		
	LNI011	standb by direct LNI011		
	CEB279	CEB279 request descend		
	CTL	CEB279 descend level 250		1
	CEB279	level 250 CEB279		
	CTL	GIA857 passing 250 further clearance contact Bali 119 decimal 7 happy landing		
	GIA857	1197 GIA857 thank you sir		
	CTL	AWQ463 direct SUMDI		
	AWQ463	Cleared direct to SUMDI AWQ463		
23.14.54	CTL	GIA401 direct MADIN		
	GIA401	Direct MADIN GIA401		
	CEB279	CEB279 to confirm descend level 250		
	CTL	CEB279 affirm descend level 250		1
	CEB279	FL250 CEB279		
23.15.19	AWQ7510	Control AWQ7510 FL350 tracking to KADAL		
	CTL	AWQ7510 identified report descend		
	AWQ7510	Descend AWQ7510		
	AWQ720	Ujung pagi AWQ720 climbing 240 direct to RABOL		
	CTL	AWQ720 identified climb level 300 initial direct to RABOL	1	
	AWQ720	Initial climb 300 direct RABOL AWQ720 request track to MADIN sir		
	CTL	stand by for direct route sir		
	AWQ720	AWQ720		
	CTL	GIA401 direct MADIN		
	GIA401	We already direct MADIN GIA401		
	CTL	LNI011 direct sierra bravo romeo first		
	LNI011	Sierra bravo romeo LNI011 thank you		
23.16.40	CTL	GIA631 passing 310 continue climb 330 contact Ujung 133 decimal 1		
	GIA631	Contact Ujung 133 decimal 1 GIA631 terimakasih selamat pagi pak		
	CTL	GIA631 correction 133 decimal 8		
	GIA631	133 decimal 8 GIA631 terima kasih pak		
	CTL	Pagi, have a nice flight		
	LNI360	Ujung good morning LNI360		
	CTL	LNI360 identified climb level 350		1
	LNI360	Climb 350 LNI360		
23.18.59	CEB279	CEB279 approaching level 250		
	CTL	CEB279 further clearance contact Bali 119 decimal 7		
	CEB279	1197 CEB279 good day		
	CTL	Good day		

TIME	PARTY	TURNS	Initials mark	ATC Instruction
23.18.59	CTL	AWQ720 climb level 380		1
	AWQ720	Climb to FL380 AWQ720		
23.19.21	AWQ550	Pagi AWQ550 FL240		
	CTL	AWQ550 identified direct to RAMPI climb level 340		1
	AWQ550	RAMPI level 340 AWQ550		
23.20.21	CTL	LNI011 direct MADIN		
	LNI011	direct MADIN zero..LNI011 thank you sir		
	CTL	welcome		
	CTL	AWQ720 direct sierra bravo romeo		
	AWQ720	Direct to sierra bravo romeo AWQ720		
23.20.56	CTL	LNI360 further clearance contact Ujung 133 decimal 8		
	LNI360	133 decimal 8 LNI360 selamat pagi pak assalamualaykum		
	CTL	Waalaykumsalam warohmatullahi wabarakatuh		
23.21.20	CTL	AWQ550 direct SUMDI		
	AWQ550	SUMDI AWQ550		
23.21.38	LNI502	Ujung LNI502 climbing passing 210		
	CTL	LNI502 identified climb level 320 initial direct RAMPI	1	
	LNI502	320 initially AWQ502		
23.22.47	LNI324	Ujung good morning LNI324 transponder 6664 FL330 tracking KADAL		
	CTL	LNI324 identified runway 09 report descend		
	LNI324	Roger call when descend LNI324		
	AWQ7510	Ujung AWQ7510 request descend		
	CTL	AWQ7510 descend level 250		1
	AWQ7510	Descend FL250 AWQ7510		
23.24.35	SJY566	Ujung..ujung selamat pagi SJY566		
	CTL	SJY566 identified passing 210 climb level 330		1
	SJY566	330 SJY566 thank you		
	CTL	welcome		
23.25.06	LNI691	Ujung LNI691 selamat pagi		
	CTL	LNI561 selamat pagi direct sierra bravo romeo climb level 360		
	LNI691	roger sir this is LNI691 selamat pagi		
	CTL	LNI691 selamat pagi maintain 360 direct OBELO runway 10 report descend		
	LNI691	Maintain 360 direct to OBELO report descend LNI691 request cancel altitude constraint over OBELO and HANKA		
	CTL	LNI691 standby		
	LNI691	standing by		
	LNI561	Ujung selamat pagi LNI561 on squawk 4400		
	CTL	LNI561 identified direct sierra bravo romeo climb level 360		1
	LNI561	roger 360 sierra bravo romeo LNI561		
	CTL	AWQ720 direct to MADIN		
23.26.05	AWQ720	Direct to MADIN AWQ720		
	AWQ7510	AWQ7510 request lower		
	CTL	AWQ7510 further clearance contact Bali 119 decimal 3		
	AWQ7510	1193 Bali AWQ7510		
23.26.55	CTL	AWQ502 climb 340 intial direct RAMPI	1	
	AWQ502	roger for 340 direct to RAMPI AWQ502		
	CTL	And AWQ502 climb level 380		1
	AWQ502	Continue climb 380 AWQ502		
23.27.31	CTL	GIA401 further clearance contact Ujung 125 decimal 9		
	GIA401	125 decimal 9 GIA401 good day		
	CTL	good day		

TIME	PARTY	URNS	Initials mark	ATC Instruction
23.29.14	CTL	AWQ463 maintain 360 further clearance contact Ujung control 134 decimal 1		
	AWQ463	1341 AWQ463		
	CTL	LNI011 further clearance contacu Ujung control 125 decimal 9		
	LNI011	Ujung 1259 LNI011 selamat pagi selamat bertugas		
	CTL	Pagi have a nice flight		
23.29.50	CTL	LNI691 cancel altitude constraint approved		
	LNI691	LNI691 roger thank you sir		
23.31.16	CTL	AWQ720 contact Ujung control 125 decimal 9		
	AWQ720	1259 AWQ720 good day sir		
	CTL	good day		
23.32.18	LNI924	Ujung Pandang control LNI924 ready for descend		
	CTL	LNI924 descend level 250		1
	LNI924	Level 250 LNI924		
23.32.59	CTL	AWQ502 after passing 360..after passing 360 direct to SUMDI		
	AWQ502	Roger sir passing 360 direct to SUMDI AWQ502 thank you		
23.33.22	JST117	Ujung control JST117 maintaing FL350		
	CTL	JST117 maintain 350 identified direct BATUR runway 09 report ready for descend		
	JST117	Direct BATUR runway 09 request BATUR 1 charlie arrival request altitude restriction JST117		
	CTL	JST117 approved		
	JST117	approved JST117		
	CTL	AWQ550 maintain 340 contact Ujung 134 decimal 1		
	AWQ550	340 confirm?		
	CTL	AWQ550 contact Ujung 134 decimal 1		
	AWQ550	1341 AWQ550 terima kasih		
	CTL	Ujung control		
23.35.00	AWQ8440	Ujung AWQ8440 climbing FL240 squawk 4422		
	CTV193	Good morning CTV193 climbing passing FL213 direct to RABOL		
	CTL	Station calling Ujung stand by break-break AWQ8440 identified climb 320 direct RABOL		1
	AWQ8440	Level 320 direct RABOL AWQ8440		
	CTL	GIA400 identified maintain 350 direct to KADAL		
	CTL	LNI2626 maintain 360 report ready for descend runway 09		
	LNI2626	ready for descend LNI2626		
	CTL	CTV600 identified passing 190 climb level 350		1
	CTV600	Confirm climb level 350 for CTV600?		
	CTL	CTV600 affirm		
	CTV600	Climb FL350 CTV600 pagi pak		
	LNI924	control LNI924 approaching FL250		
	CTL	LNI924 further clearance contact Bali 119 decimal 3		
	LNI924	1193 LNI924 thank you sir selamat pagi		
	CTL	pagi		
	CTV193	....flight level 243		
	CTL	AWQ8440 confirm?		
	CTV193	Negative CTV193		
	CTL	CTV193 identified climb level 300 initial	1	
	CTV193	300 initially CTV193		
	CTL	CTV193 recleared climb level 380		1
	CTV193	Climb and maintain 380 CTV193		
	GIA400	GIA400		
	CTL	GIA400 identified direct KADAL report descend runway 09		
	GIA400	Direct KADAL report descend runway 09 GIA400		
	CTL	AWQ502 contact Ujung 134 decimal 1		
	AWQ502	1341 AWQ502 good day sir		

TIME	PARTY	TURNS	Initials mark	ATC Instruction
23.37.42	GIA449	Ujung control selamat pagi GIA449 level 380		
	CTL	GIA449 identified direct OBELO report descend		
	GIA449	Direct OBELO report ready for descend GIA449		
	GIA604	Ujung GIA604 pagi		
	GIA604	GIA604 selamat pagi continue BADOK maintain 370		
	CTL	370 GIA604		
	CTL	CTV600 for spacing traffic initial heading 095	1	
	CTV600	Heading 095 CTV600		
23.38.55	CTL	CTV600 keep heading 095 until abeam ENTAS then track direct to november quebec		
	CTV600	keep heading 095 until abeam ENTAS and then direct to november quebec CTV600		
	CTL	Ujung control		
23.40.00	BTK6288	Ujung control selamat pagi this is BTK6288		
	CTL	BTK6288 maintain 350 identified direct BADOK sequence number 2 traffic ahead 11 miles		
	BTK6288	Number 2 direct to BADOK BTK6288		
23.40.35	LNI2626	LNI2626 ready for descend		
	CTL	LNI2626 descend 250		1
	LNI2626	250 LNI2626		
23.41.08	LNI691	LNI691 request descend		
	CTL	LNI691 descend level 250		1
	LNI691	level 250 LNI691		
	CTL	LNI2626 initial heading 200	1	
	LNI2626	Heading 200 LNI2626		
23.41.42	CTL	LNI2626 recleared heding 230		1
	LNI2626	230 LNI2626		
23.42.02	CTL	CTV600 direct november quebec		
	CTV600	Direct november quebec CTV600		
	GIA400	Ujung GIA400 request descend		
	CTL	GIA400 descend level 250		1
	GIA400	Level 250 GIA400		
	CTL	AWQ8440 for spacing traffic initial heading 285	1	
	AWQ8440	Heading 285 AWQ8440		
23.42.49	CTL	JST117 direct KASAP		
23.42.58	CTL	JST117 KASAP report ready descend		
	JST117	Fly direct to KASAP and we are ready for descend JST117		
23.43.10	QTR964	Good morning QTR964 FL350		
	CTL	QTR964 identified runway 09 report descend		
	QTR964	report ready for descend QTR964		
	JST117	JST117 request descend		
	CTL	JST117 descend level 200		1
	JST117	Descend FL200 JST117		
	CAMAR01	Ujung good morning CAMAR01 on squawk 4502		
	CTL	CAMAR01 identified direct to KOLTA		
	CTL	CAMAR01 correction direct to KASOL		
	CAMAR01	Direct to KASOL CAMAR01		
23.44.22	CAMAR01	Ujung CAMAR01 request direct to sierra bravo romeo		
	CTL	Station calling Ujung say again		
	CAMAR01	Ujung CAMAR01 request direct to sierra bravo romeo		
	CTL	CAMAR01 approved		
	CAMAR01	Thank you CAMAR01		
	CTV663	Good morning Ujung CTV663 squawking 4421 climb level 240 passing 170		
	CTL	CTV663 identified direct to RABOL climb to level 300 initial	1	
	CTV663	RABOL 300 initial CTV663		

TIME	PARTY	TURNS	Initials mark	ATC Instruction
	CTL	GIA434 identified maintain 350		
	GIA434	Maintain 350 GIA434		
	LNI2626	LNI2626 approaching 250		
	CTL	LNI2626 descend level 220 initial	1	
	LNI2626	Descend 220 initial confirm maintain heading 230?		
	CTL	Maintain heading 230 to follow traffic position 38 miles		
	LNI2626	copied LNI2626		
	LNI691	LNI691 approaching level 250		
	CTL	LNI691 further clearance contact Surabaya 124 decimal 0		
	LNI691	1240 LNI691 terima kasih Assalamualaykum pak		
	CTL	Alaykum salam		
	CTV700	Ujung good morning CTV700 maintain FL370 and request descend		
	CTL	CTV700 descend level 250		
	CTV700	Level 250 CTV700		
23.46.37	CTL	LNI2626 direct to KASAP		
	LNI2626	KASAP LNI2626		
	QTR964	QTR964 request descend		
	CTL	QTR964 descend level 310 initial	1	
	QTR964	Descend level 310 QTR964 and just confirm the arrival please		
	CTL	Follow BATUR 1 charlie sir		
	QTR964	oke thank you		
	CTL	GIA604 and BTK6288 in turns contact Ujung 133 decimal 8		
	GIA604	1338 good day		
	CTL	AWQ8440 direct sierra bravo romeo		
	AWQ8440	Direct sierra bravo romeo AWQ8440		
	CTL	GIA400 contact Bali 119 decimal 3		
	GIA400	119 decimal 3 GIA400 good day		
	CTL	JST 117 LNI2626 in turn contact Bali 119 decimal 3 for further clearance		
	JST117	119 decimal 3 JST117		
	LNI2626	1193 LNI2626		
23.47.49	LNI561	LNI561 confirm maintain frequency?		
	CTL	LNI561 contact Ujung 125 decimal 9		
	LNI561	1259 have a nice day LNI561		
	CTL	Have a nice flight		
23.48.31	CTL	QTR964 descend 290 initial	1	
	QTR964	Roger 290 QTR964		
23.49.19	CTL	AWQ8440 contact Ujung 125 decimal 9		
	AWQ8440	1259 AWQ8440 good day		
	CTL	good day		
	CTL	CTV663 climb level 380		
	CTV663	Climb level 380 CTV663		
23.49.48	CTL	CTV700 further clearance contact Surabaya 124 decimal 0		
	CTV700	Oke 1240 CTV700 good day		
	CTL	good day		
	CTL	QTR964 descend level 250		
	QTR964	Descend to level 250 QTR964		
23.50.38	GIA449	GIA449 request descend		
23.50.49	GIA449	Ujung GIA449 request descend		
	CTL	GIA449 descend 310 initial	1	
	GIA449	Roger descend 310 initial GIA449		
23.51.40	CTL	QTR964 passing 285 further clearance contact Bali 119 decimal 3		

TIME	PARTY	TURNS	Initials mark	ATC Instruction
23.51.40	CTL	QTR964 passing 285 further clearance contact Bali 119 decimal 3		
	QTR964	down to FL250 1193 QTR964		
	CTL	QTR964 releared descend initial level 260	1	
	CTL	QTR964 descend initial level 260		
	QTR964	Descend FL260 QTR964		
	CTL	QTR964 now contact Bali 119 decimal 3		
	QTR964	QTR964 bye-bye		
	CTL	bye		
23.52.43	CTL	CTV193 direct MADIN		
	CTV193	To MADIN CTV193		
23.53.26	CTL	BTK6288 contact Ujung 133 decimal 8		
	BTK6288	Ujung 133 decimal 8 BTK6288		
23.53.57	CTL	CTV193 further clearance contact control 125 decimal 9		
	CTV193	Ujung Pandang control frequency 125 decimal 9 CTV193 thank you sir, have a nice moming		
	CTL	good day		
	GIA449	GIA449 approaching level 310		
	CTL	GIA449 descend descend level 250		1
	GIA449	Descend level 250 GIA449		
	CTL	CTV663 direct to MADIN		
	CTV663	Cleared direct to MADIN CTV663		
23.54.42	CTL	CTV600 further clearance contact Ujung 133 decimal 8 have a nice flight		
	CTV600	1338 CTV600 makasih pak assalamualaykum		
	CTL	Waalaykumsalam warohmatullahi wabarakatuh		
23.56.31	GIA449	GIA449 approaching FL250		
	CTL	GIA449 furhter clearance contact Surabaya 124 decimal 0		
	GIA449	Surabaya 1240		
23.58.57	LNI2648	Ujung LNI2648		
	CTL	LNI2648 identified direct GALKO - GALKO 3 charlie runway 09		
	LNI2648	Direct GALKO - GALKO 3 charlie runway 9 LNI2648 any chance direct KASAP		
	CTL	LNI2648 stand by KASAP		
	LNI2648	Standby LNI2648		
23.59.49	AWQ7516	Ujung control selamat pagi AWQ7516 FL350 directing to KADAL		
	CTL	AWQ7516 identified direct KADAL runway 09 report descend		
	AWQ7516	Directing KADAL runway 09 and wilco AWQ7516		
00.00.16	LNI2648	Ujung LNI2648 ready for descend		
	CTL	LNI2648 descend 250 direct KASAP		
	LNI2648	Direct KASAP LNI2648		
			15	30
		Total Instruction Climb/descend		45
		Prosentase Pneggunaan Initial	33%	

## APPENDIX 14

### List of Abbreviations

- ATC : Air Traffic Controller is a person who manages aircraft from the ground as they take off, fly, and land.
- ATIS : Automatic Terminal Information Service is a recording that some airports broadcast in order to reduce frequency congestion. Current weather information, active runway information, NOTAMs, and other useful pieces of information are included in the ATIS. The ATIS is usually updated every hour or when there is a sudden weather change at the airport.
- ATS : Air Traffic Service is a generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control service (area control service, approach control service or aerodrome control service).
- CPDLC. : Controller-Pilot Data-link Communication is a means of communication between controller and pilot, using data link for ATC communications.
- Flight Level : Flight Level is a surface of constant atmospheric pressure which is related to a specific pressure datum, 1 013.2 hectopascals (hPa), and is separated from other such surfaces by specific pressure intervals. (Ex. F320 = 32000 feet)
- FIR : Flight Information Region is an airspace of defined dimensions within which flight information service and alerting service are provided.
- ICAO. : International Civil Aviation Organization is a specialized agency of the United Nations. It changes the principles and techniques of international air navigation and fosters the planning and development of international air transport to ensure safe and orderly growth
- IELP : ICAO English Language Proficiency
- MATSC : Makassar Air Traffic Service Center is one of the AirNav branches located in Makassar (South Sulawesi).



- Phrase. : is a small group of words standing together as a conceptual unit, typically forming a component of a clause
- Phraseology : The definition of phraseologies are grouped according to types of air traffic service for convenience of reference.
- SSR : Secondary surveillance radar is A surveillance radar system which uses transmitters/receivers (interrogators) and transponders.
- VSAT : Very-Small-Aperture Terminal is a two-way satellite ground station with a dish antenna that is smaller than 3.8 meters.