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Communication Protocol

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DOCUMENT CONTROL

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AMENDMENT HISTORY RECORD

Rev No.	Effective Date of Change	Section & Sub- Section Amended	Amendments/ References	Party Requesting for Change
1	XX Oct 2013	Whole Document	Due to organization change of division name from ITSC to ITSO.	DOM, ITSO OCC
2	XX Dec 2020	Whole Document	Due to change of Staff Designations in ITSO OCC Delete SOE, insert DM Delete DySOE, insert DyAM	Mgr, ITSO OCC

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Section 1. Introduction

1.1.1 This document describes the communication protocol, disciplines and guidelines on the use of words and voice procedure when using radio or mobi-talk and phone system while conducting business or carrying out duties.

Section 2. Personnel Involved

- a) Maintenance staff & contractors
- b) ITSO OCC staff
- c) LTM & VRS staff
- d) Other LTA department staff
- e) External Agencies

Section 3. Communications During Abnormal Circumstances

Sub-Section 3.1 Communication Failure

3.1.1 In the event of suspected one-way communication failure, the sender can use the words “transmitting blind” followed by the content of the message to be sent to the receiver.

3.1.2 In the event when nothing is heard, both receiver and sender shall send out a last blind transmission saying, “Nothing heard out”.

3.1.3 When communication equipment failure (two-way failure) is confirmed, the most available alternative source of communication should be used.

Sub-Section 3.2 Communication During Emergency

3.2.1 In any emergency situation all initial first call must be prefix with the words “Emergency”

3.2.2 All emergency communications shall have priority over all other communications. All relevant parties must keep silent when hearing the word “emergency” prefix before any call-sign

3.2.3 Read back message is a must by receiving party especially for confirming safety critical messages during an emergency situation.

Section 4. Radio & Mobi-Talk Communications

Sub-section 4.1 Radio & Mobi-Talk Protocol

4.1.1 Voice control is important for radio & mobi-talk communications, to observe the following points:

- a) To preserve a natural rhythm like an ordinary conversation.
- b) Keep a constant speed slightly slower than in normal conversation.
- c) Volume must not be too loud or too soft, speak every word clearly but do not shout and do not let voice fade away towards the end of the sentence.
- d) Speak in a slightly higher pitch tone to allow for better transmission.

4.1.2 During initial contact, start any radio or mobi-talk messages with the call sign of the caller followed by the call sign of the party to talk to (receiving party).

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4.1.3 For subsequent messages after establishing initial contact, these messages will be prefix with the call sign of the receiving party.

4.1.4 When messages are not clear or a repeat of messages is required, use the phrase “Say Again” at the end of the message if the receiver wants the caller to repeat the message.

Sub-Section 4.2 Radio & Mobi-Talk Discipline

4.2.1 All communication is for official business or duty and must only be in English.

4.2.2 Words used must be appropriate, easy to understand and contain no expletives (vulgar language). Jargons must be avoided.

4.2.3 All communication messages must be brief (if possible), clear and concise.

4.2.4 All communication must be specific in instructions or actions to the receiver.

4.2.5 When in doubt, always clarify queries and allow no assumption.

4.2.6 Always read back important, emergency or safety related messages.

4.2.7 Always spell out individual letters (using the List of phonetic Alphabets in Attachment 1) or numerical figures for important words or numbers or call signs.

4.2.8 Always allow an interval of 3 seconds between messages to allow for interruption of emergency messages if any.

4.2.9 As far as possible to use words or phraseologies listed in Attachment 2, if not possible words used must meet the criteria stated in 4.2.2 above.

4.2.10 Never jam (cut) in radio or mobi-talk messages unless in an emergency.

Section 5. Phone System & Mobi-Talk in Handphone Mode Communications

Sub-Section 5.1 Phone (Landline), Handphone & Mobi-Talk in Handphone Mode Protocol

5.1.1 Voice control is important, to observe the following points:

- a) To preserve a natural rhythm like an ordinary conversation.
- b) Keep a constant speed slightly slower than in normal conversation.
- c) Volume must not be too loud or too soft, speak every word clearly but do not shout and do not let voice fade away towards the end of the sentence.
- d) Speak in a slightly higher pitch tone to allow for better transmission.

5.1.2 When making a call the caller must give name, location of calling, company name and designation (if required).

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5.1.3 When receiving a call, receiver must first mention the location (ITSO Control Center) of the receiver before asking the caller for his/her identity (if caller did not identify themselves). Receiver must give name, company name and designation (if required)

5.1.4 User must end call immediately if it is noticed that the incoming call in queue is an emergency call (if applicable).

5.1.5 If call is disrupted or terminated prematurely the caller should try to re-establish call again if possible.

5.1.6 When terminating a call both user must “hang up” their respective phones properly. Do not slam down handset.

5.1.7 When messages are not clear or a repeat of messages is required, use the phrase “Say Again” at the end of the message if the receiver wants the caller to repeat the message.

Sub-Section 5.2 Phone (Landline), Handphone & Mobi-Talk in Handphone Mode Discipline.

5.2.1 All communication is for official business or duty and must be in English unless the caller is unable to communicate in English.

5.2.2 Words used must be appropriate, easy to understand and contain no expletives (vulgar language). Jargons must be avoided.

5.2.3 All communication messages must be brief (if possible), clear and concise.

5.2.4 When in doubt, always clarify queries and allow no assumption.

5.2.5 Always read back important, emergency or safety related messages.

5.2.6 Always spell out individual letters (using the List of phonetic Alphabets in Attachment 1) or numerical figures for important words or numbers

Section 6. Abbreviations

ITSO Intelligent Transport Systems Operations
LTA Land Transport Authority
LTM Land Transport Authority Traffic Marshals
OCC Operations Control Center
DM Deputy Manager
OE Operations Executives.
VRS Vehicle Recovery Service

Section 7. References & Attachments

1. Intelligent Transport Systems Center (Operations), Integrated Standard Operating Procedures
2. LTA Traffic Marshals OCC Ops Manual, June 2008

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ATTACHMENT 1

LIST OF PHONETIC ALPHABETICAL CODES

A	ALPHA
B	BRAVO
C	CHARLIE
D	DELTA
E	ECHO
F	FOXTROT
G	GOLF
H	HOTEL
I	INDIA
J	JULIET
K	KILO
L	LIMA
M	MIKE
N	NOVEMBER
O	OSCAR
P	PAPA
Q	QUEBEC
R	ROMEO
S	SIERRA
T	TANGO
U	UNIFORM
V	VICTOR
W	WHISKEY
X	X-RAY
Y	YANKEE
Z	ZULU

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ATTACHMENT 2

LIST OF WORDS & PHRASEOLOGIES

Note: Those words or phraseologies marked “*” are common for radio, mobi-talk & phone system.

WORD OR PHRASEOLOGY	MEANING
Affirmative or that is correct*	To indicate that a message has been correctly received
All stations	To indicate that a collective call to all receiver station on the frequency is being made
Difficult*or broken/intermittent	To indicate that the signal received by a particular station is weak during a radio/phone check
Downstream*	Use to describe traffic condition after the point of incident, junction or a particular reference point.
Emergency, Emergency or this is an emergency call (for phone system)	To indicate an emergency message
Figures* or numbers*	To preface numerical figures to be announced individually
Line Check	To ascertain that a message sent via the phone system is received by a particular station
Message	To indicate that a message is to be sent
Nothing heard	To indicate that no message has been received or acknowledged
Okay (OK)*/Loud & Clear*	To indicate that the signal received by a particular station is good during a radio/phone check
Out	To indicate at the end of a message that a reply is not required
Over	To indicate at the end of a message that a reply is required
Radio Check	To ascertain that the message sent via the radio or mobi-talk is received by a particular station
Read back message*	To indicate that a message must be repeated by the receiver to ensure that it has been correctly understood
Roger	To indicate that a message has been received and understood
Say again	To request the sender to repeat the message
Send	To indicate readiness to receive a message
Spell out	To preface words to be spelt out in phonetic Alphabets (See Attachment 1)
Upstream*	Use to describe traffic condition before the point of incident, junction or reference point.
Wait/standby*	To indicate a pause in message, requesting the receiver to wait for further instructions
Wilco	To indicate a message has been received, understood and will be acted on.
Wrong* or negative*	To indicate that a message has been incorrectly received

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ATTACHMENT 3

List of Standard Reporting Protocols

a) Open Expressways

An incident occurring on the open expressway is indicated as follows: **"expressway name", "direction of travel", "kilometer mark", "event location", "type of event", "lane number"** or, **"expressway name", "direction of travel", "exit name", "kilometer mark", "type of event"**.

For instance, PIE, Tuas, 35.5 km, accident on lane 1.

- The terms used for communications follow the International Alphabetical Code. For example, recovery crew for AYE is denoted by Alpha, recovery crew for BKE is denoted by Bravo, etc.

b) Tunnels

An incident occurring in the tunnel is stated in the following sequence:

"name of tunnel", "sector number", "type of event", "lane number" or **"name of slip", "type of event"**.

For example, Chin Swee Tunnel, Sector 7, vehicle breakdown on lane 3.

c) Arterial Roads

An incident occurring on the arterial road is indicated as follows:

"name of road", "direction of travel", "landmark" (if any), "type of event", "lane occupied"

For example, Victoria St, towards Kallang Road, beside Carlton Hotel, accident on the centre lane.

d) Traffic Light Fault Reporting

The protocols for traffic light fault reporting is established as follows:

A traffic light fault is reported in the following manner:

"road names at junction", "intersection number", "box number", "type of fault"

For example, Eunos Link / Kaki Bt Ave 2 / Ubi Ave 3, intersection number 6508, box number 1784, blackout.

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ATTACHMENT 4-List of Call Signs

Call Sign	Users
Control	ITSO OCC Operations Executives (OE) & DM
ADO	VRS Deployment Officers (OCC)
Alpha 1	VRS Recovery Crew (Patrol) -AYE
Alpha 2	VRS Recovery Crew (Patrol)-AYE/ECP
Bravo	VRS Recovery Crew (Patrol)-BKE
Charlie 1- 4	VRS Recovery Crew (Patrol)-CTE
Charlie Night 2- 4	VRS Recovery Crew (Patrol)-CTE Night
Delta Romeo	VRS Recovery Crew (Patrol)-Bukit Timah /Dunearn Rd
Echo 1- 2	VRS Recovery Crew (Patrol)-ECP
Kilo	VRS Recovery Crew (Patrol)-KJE/PIE
Kilo Papa 1- 4	VRS Recovery Crew (Patrol)-KPE (Under KPE OCC Control)
Papa 1-9	VRS Recovery Crew (Patrol)-PIE
Sierra	VRS Recovery Crew (Patrol)-SLE
Tango Charlie	VRS Recovery Crew (Patrol)-CTE Tunnel & FCT
Tango Bravo	VRS Recovery Crew (Patrol)-Telok Blangah/Pasir Panjang Viaduct
Tango 1	VRS Recovery Crew (Patrol)-TPE
Tango Night	VRS Recovery Crew (Patrol)-TPE Night

Call Sign	Users
Control	ITSO OCC Operations Executives (OE) & DM
Alpha Mike 1 & 2	LTM (Patrol) -AYE
Bravo Mike 1	LTM (Patrol)-BKE/KJE
Charlie Mike 1,2 & 3	LTM (Patrol)-CTE
Echo Mike 1 & 2	LTM (Patrol)-ECP
Kilo Mike 1 & 2 & 3	LTM (Patrol)-KPE (Under KPE OCC Control)
Papa Mike 1-5	LTM (Patrol)-PIE
Sierra Mike 1	LTM (Patrol)-SLE
Tango Mike 1	LTM (Patrol)-TPE

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ATTACHMENT 5-COMMUNICATIONS WITH EXTERNAL AGENCIES FOR CTE TUNNEL

OUTSIDE SECTOR 1

"Before Kampong Java Tunnel, going towards AYE"

SECTOR 1 / SECTOR 2

"Inside Kampong Java Tunnel, going towards AYE"

SECTOR 3

"Opened expressway, going towards AYE, after Kampong Java Tunnel"

SECTOR 4

"Inside Chin Swee Tunnel, going towards AYE"

SECTOR 5

"Inside Chin Swee Tunnel, going towards AYE, you can come in by Merchant Road entrance"

SECTOR 6

"Depressed expressway before Chin Swee Tunnel, going towards Ang Mo Kio, you can come in by Outram Road entrance"

SECTOR 7 (BEFORE UPPER CROSS STREET ENTRANCE)

"Inside Chin Swee Tunnel, going towards Ang Mo Kio, you can come in by Outram Road entrance"

SECTOR 7 (AFTER UPPER CROSS STREET ENTRANCE)

"Inside Chin Swee Tunnel, going towards Ang Mo Kio, you can come in by Upper Cross Street entrance"

SECTOR 8

"Opened expressway, going towards Ang Mo Kio, you can come in by Kramat Road entrance"

SECTOR 9

"Inside Kampong Java Tunnel, going towards Ang Mo Kio"

OUTSIDE SECTOR 9

"Outside Kampong Java Tunnel, going towards Ang Mo Kio"

Note: For communication with external agencies actual entrance and exit name must be used to describe tunnel entrance and exit slip. Tunnel Sectors 1-9 reference is used mainly for communication with tunnel contractors, LTA traffic marshals and Vehicle recovery service crew.

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