Vehicle Tracking System Policies & Procedures

Monitoring and Recording of Airfield Areas for Operation and Safety Purposes

Version 1

Dated: 31 October 2016

Effective: 1 November 2016

<table>
<thead>
<tr>
<th>Name / Position</th>
<th>Function</th>
<th>Signature</th>
<th>Date</th>
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<tbody>
<tr>
<td>Albert Ho / AGM, Standards &amp; Service Delivery</td>
<td>Policy Owner</td>
<td>Original Signed</td>
<td>31 Oct 16</td>
</tr>
<tr>
<td>Phileas Chan / Legal Counsel</td>
<td>Advisor</td>
<td>Original Signed</td>
<td>31 Oct 16</td>
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<tr>
<td>Steven Yiu / GM, Airfield</td>
<td>Endorser</td>
<td>Original Signed</td>
<td>31 Oct 16</td>
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1. POLICY & PURPOSE

The purpose of this policy is to provide guidance regarding the use of Vehicle Tracking data in the Airport Restricted Area and Indoor Tracking Area, Hong Kong International Airport (HKIA). Vehicle Tracking System is used to enhance operational efficiency, situational awareness and post-accident investigation and incident prevention.

By 31st December 2016, all Airside Vehicles & Mobile Equipment that operate in or enter into the Airport Restricted Area or the Indoor Tracking Area must be equipped with vehicle trackers approved by the Airport Authority. For vehicles that hold ad hoc vehicle permits, they must have Removable Trackers up and running when entering the Airport Restricted Area.

The Airfield Department of Airport Authority is charged with reviewing, recommending, approving and managing proposed and existing Vehicle Tracking applications in airfield area, HKIA. Assistant General Manager, Standards & Service Delivery, (AGM, S&SD) is responsible for the biennial review of this policy to reflect changes in the airfield environment or applicable Hong Kong laws.

Airport Authority will review this policy on a regular basis and please read Airfield Circular OC/43/2015 in conjunction with this policy.

1.1. Definitions:

a. Vehicle Tracking: Vehicle tracking utilizes a vehicle tracking unit which is a device carried by a moving vehicle, that uses the Global Navigation Satellite System to determine and track the precise location of the vehicle tracking unit, and hence that of its carrier, i.e. the moving vehicle, at intervals. The recorded location data can be stored within the vehicle tracking unit, or it may be transmitted to a central location data base, or Internet-connected computer using a cellular (GPRS or SMS), radio, or satellite modem embedded in the vehicle tracking unit. This allows the vehicle's location of the moving vehicle to be displayed against a map backdrop either in real time or when analyzing the track of the moving vehicle later, using vehicle tracking software.
b. **Airside Vehicles & Mobile Equipment**: All vehicles and equipment that are required to operate in the Airport Restricted Area of the Hong Kong International Airport and shall include vehicles that hold ad hoc vehicle permits.

c. **Airport Restricted Area (ARA)**: The area indicated in green in Appendix A.

d. **Airside Vehicle Licence (AVL)**: The Licence issued by the Airport Authority for vehicles driven in the ARA pursuant to Airport Authority Bylaw.

e. **Business Partner**: Any entity that operates in the Airport Restricted Area and / or the Indoor Tracking Area.

f. **Global Navigation Satellite System or GNSS**: The satellite navigation system that is used to pinpoint the geographic location of a user’s receiver. The one that adopted in HKIA is the United States’ Global Positioning System (GPS).

g. **Indoor Tracking Area**: The area indicated in blue in Appendix B.

h. **Removable Tracker**: A vehicle tracking unit that can be installed or removed from a vehicle at will.

2. **APPLICABILITY**

   This policy applies to all Airside Vehicles & Mobile Equipment that operate in the Airport Restricted Area and Indoor Tracking area. Please refer to Appendices A & B.

3. **PROCEDURES**

   3.1 **Subscription**

   The Airport Authority has appointed a GPS provider to provide Vehicle Tracking system for Airside Vehicles & Mobile Equipment. For subscription, please go to HKIA Extranet at the following path:
For details, please contact the Authority’s appointed GPS provider as follows:

```
<table>
<thead>
<tr>
<th>24-hour Customer Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tel no: 2370 0776</td>
</tr>
<tr>
<td>Email: <a href="mailto:aagps@digimobi.net">aagps@digimobi.net</a></td>
</tr>
</tbody>
</table>
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Terms & Conditions for the Vehicle Tracking System Policies & Procedures would be reviewed and updated from time to time on a need basis. The latest version could be downloaded from the vehicle tracking platform at the following path:

```
https://extranet.hongkongairport.com/ > Procedure Manual > AD Procedures > Vehicle Tracking System in HKIA
```

### 3.2 New Airside Vehicles & Mobile Equipment

For Airside Vehicles & Mobile Equipment, their owners shall submit GPS onboard unit installation application to the Authority’s appointed GPS provider prior to AVL application. Booking confirmation document with the GPS provider is required to be provided upon AVL application. GPS onboard unit installation shall be completed within 5 working days after the date of issue of AVL.

### 3.3 Current Airside Vehicles & Mobile Equipment

For Airside Vehicles & Mobile Equipment with AVL, the transmission power and frequencies generated by the GPS onboard unit would be measured during the annual Airside Vehicle Examination to ensure compliance with relevant Office of the Communications (OFCA) specification(s). In the event of non-compliance, AVL of the Airside Vehicle & Mobile Equipment concerned would be suspended until compliance has been met.
3.4 Vehicles with ad hoc vehicle permit

Owner of vehicles with an ad hoc vehicle permit shall carry and energize a Removable Tracker before entering the ARA. Removable Tracker shall be activated at all times within the ARA. Detail arrangement will be promulgated via the ad hoc vehicle permit application procedures.

4. DATA POLICY

The Airfield Department is using Vehicle Tracking system to monitor Airside Vehicles & Mobile Equipment in order to improve operational efficiency and safety of the Airport Restricted Area and the Indoor Tracking Area.

Using the master Vehicle Tracking system, Airport Authority can view the location and other associated information of all Business Partners’ Airside Vehicle & Mobile Equipment within the Airport Restricted Area and Indoor Tracking Area.

A Business Partner can only view its own fleet location and related information using its subscribed Vehicle Tracking system but not other Business Partner(s) unless explicit written authorization has been granted by such other Business Partner(s).

4.1 Usage of Vehicle Tracking data

“Intended Purpose”, the use of Airport Authority’s master Vehicle Tracking system is confined to the following aspect:-

1. Operation monitoring
2. Accident investigation
3. Serious incident investigation including “Not Give Way to Aircraft”
4. Operation efficiency enhancement projects
5. Airport Collaborative Decision Making

Airport Authority will not use the data gathered from its master Vehicle Tracking system other than the Intended Purpose.

4.2 Information to be collected and displayed as mandated by the Airport Authority
The Airport Authority collects the following data from its master Vehicle Tracking system:

**For Tracking in the Airport Restricted Area**

1. Location and Speed Tracking
2. Vehicle Speed Monitoring and Alert
3. Vehicle Route Monitoring
4. Vehicle Status Identification
5. Vehicle Usage and Utilization Analysis

**For Tracking in the Indoor Tracking Area**

In addition to the above, the Airport Authority collects data from its master Vehicle Tracking system to identify the correct location zone of Airside Vehicles & Mobile Equipment within the Indoor Tracking Area.

### 4.3 Recording and Storage of vehicle tracking data

Real time data of a Business Partner captured by the Airport Authority’s master Vehicle Tracking system is displayed on that Business Partner’s system panel and *authorized user(s) of the Airport Authority can retrieve and play back near time historic data up to previous 30 days.

The offline record captured by the Airport Authority’s master Vehicle Tracking system shall not be retained for more than 30 calendar days and thereafter be migrated to the historic record database.

All Vehicle Tracking historical records will not be kept for more than 90 calendar days and will be deleted thereafter.

*Authorized user refers to officer of the Airfield Department at Assistant Manager level or above.*

### 4.4 Playback of offline records

Airport Authority’s master Vehicle Tracking system is not capable of playing back offline records. For records not more than 90 days from current day, a Business Partner may submit request to the appointed GPS service provider to retrieve the offline data.
4.5 Log-in Accounts Control

Business Partners are allowed to create limited numbers of the log-in accounts as follows:

<table>
<thead>
<tr>
<th>No. of vehicles/ mobile equipment</th>
<th>No. of accounts</th>
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<tbody>
<tr>
<td>&gt;101</td>
<td>50</td>
</tr>
<tr>
<td>21 - 100</td>
<td>20</td>
</tr>
<tr>
<td>6 - 20</td>
<td>5</td>
</tr>
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<td>1-5</td>
<td>2</td>
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Business Partners shall design on their own accounts hierarchy to allow certain users as super users to get access to all features of the Vehicle Tracking system that are displayed on their own system panel whilst ordinary users can only get access to data arising from normal day to day operations.

4.6 Statistical reports

Standard statistical reports are available, if special ad hoc report is required by the Business Partner(s), they may be released to Business Partner(s) upon special request made to Assistant Manager, Standards & Service Delivery of Airfield Department at AAAMS@hkairport.com. For the release of any report, the Airfield Department's judgment is final.

4.7 Law Enforcement Departments Vehicles

For data gathered from law enforcement authorities, they will be handled under special arrangement.

5. RESPONSIBILITIES

Airfield Department oversees and coordinates the use of the master Vehicle Tracking system to improve airfield operational efficiency and safety.
6. INTERFACE REQUIREMENTS

Business Partners’ use of Vehicle Tracking system shall not cause interference to other systems in the HKIA especially the air navigational system. Any Vehicle Tracking equipment installed must always comply with the requirements stipulated in the Telecommunications Ordinance (Cap.106).

Vehicle owners shall self-declare for any GPS installation from providers other than the Authority’s appointed GPS provider during Airside Vehicle Licence/Ad-hoc vehicle permit application. Such installation and usage shall be in compliance with the requirements stipulated in the Telecommunications Ordinance (Cap 106).

Service providers other than the Authority’s appointed GPS provider (i.e., DigiMobi Technology Limited) who want to interface with and feed data to the Authority’s master Vehicle Tracking system as described in Airfield Circular OC/43/2015 must apply to and be approved by the Authority. For the requirements, please refer to Appendix C - Interface Requirement Specifications of Vehicle Tracking Service Providers in Hong Kong International Airport.

7. DATA IMPORT to THE AUTHORITY’S SYSTEM

Approved service providers shall refer to Appendix D - Application Programming Interface (API) Specification and Appendix E – API User Guide to import data to the Authority’s master Vehicle Tracking system.

8. REMOVABLE TRACKER

For those vehicles that are not issued with Airside Vehicle License and with the genuine need to enter the ARA, under the ad hoc vehicle permit application regime, ad hoc vehicle permits will be issued to the sponsor companies. The sponsor company must ensure and remind the driver it sponsors to install and energize the Removable Tracker that is issued to him/her in conjunction with the ad hoc vehicle permit and shall return the Removable Tracker to the sponsor company upon leaving the ARA.
Appendix A – Airport Restricted Area – highlighted in green
Appendix B – Indoor Tracking Area – highlighted in blue