

Manual System Avoidance Requirements

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Revision History

Date	Version	Description
July 2010	1.0	Initial release



1. Introduction

Manual System Avoidance is a capability of high interest to many CDMA carriers such as China Telecom and also other to operators of the CDMA Development Group (CDG). There are some CDMA networks that do not explicitly reject some inbound roaming users' registration, but also do not provide roaming services to those users. Such configurations may cause the MS to camp on an unusable network, where the user will not be able to get international roaming services. Manual System Avoidance can help CDMA operators to solve this problem.

This document aims to state the technical requirements on the MS to realize the Manual System Avoidance, which can provide the convenience for the user to select the next available network manually.

Requirements are listed below as they apply to each element.

1.1 Definition

Manual System Avoidance can provide the convenience for the user to control the MS to avoid the current registered network manually and select the next available network. The MS user interface can provide a menu or shortcut to invoke the function 'Manual System Avoidance'. When invoking this function, the handset adds the SID of the current serving network to the System Avoidance list and restarts to search the next network available. With this method, the handset will obtain a new network not contained in the System Avoidance list.

1.2 Standards Support

The requirements in this document are based primarily on the capabilities offered by IS-2000 Rel 0. Other standards referenced are IS-875 and IS-637.

1.3 Minimum Requirements

Of the requirements shown below, those that are suggested to make up the minimum set are distinguished by the use of "shall" rather than "may" or "should" in the requirement wording.

1.4 Acronyms and Abbreviations

Term	Meaning
CDG	CDMA Development Group
GHRC	Global Handset Requirements for CDMA
MS	Mobile Station
MSA	Manual System Avoidance
PRL	Preferred Roaming List

1.5 Terms and Definitions

Three categories of requirements are established:

(M) Mandatory	The handset must support that characteristic in order to achieve approval.
(HD) Highly Desirable	It is highly desirable and recommended that the handset supports this characteristic. This feature may become Mandatory in subsequent versions of the document. Supporting this characteristic will be valued in the commercial promotion of the device.
(O) Optional	It is left up to the manufacturer whether or not the device supports this characteristic. The handset may support this characteristic.



2. Mobile Station Requirements

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Req. #	Requirement	Category	Remarks	References
2.1	The MS shall provide a menu or shortcut for the user to invoke the function 'Manual System Avoidance', which can make the MS avoid the current network and restart to search a new network available.	M	The name of the menu or shortcut can be 'Next Network' or any other words that won't bring ambiguity to the user.	

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Req. #	Requirement	Category	Remarks	References
2.2	When the Manual System Avoidance functionality is set, the MS shall first add the SID of the current serving network into a system avoidance list. One exception is that MS hasn't camped on any network. In this case the MS shall ignore this command. The MS shall then start to search the network based on MRU and PRL, but the networks contained in the system avoidance list shall be avoided.	M		

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Req. #	Requirement	Category	Remarks	References
2.3	The system avoidance list of MS shall be able to store at least ten SIDs of different networks.	M	A number such as ten is desired since a user can be in the scenario whereby in a specific network may be composed of different SIDs and a user may need to have a large enough system avoidance list to ensure they are not constantly camping on an unusable network	

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Req. #	Requirement	Category	Remarks	References
2.4	When the MS is reset (powered off and then powered on), the system avoidance list on the MS shall not be cleared.	M	It is desired that the system avoidance list not be cleared when powered off, since the user may turn of the device while still roaming, and would therefore have to perform all the steps for system avoidance all over again.	

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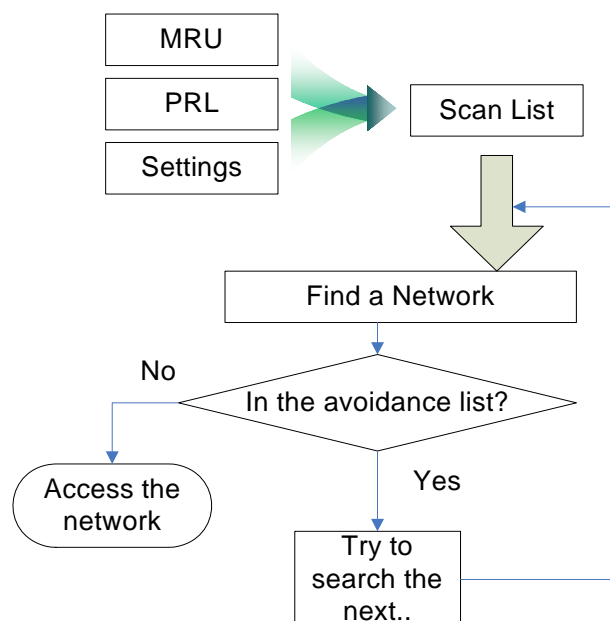
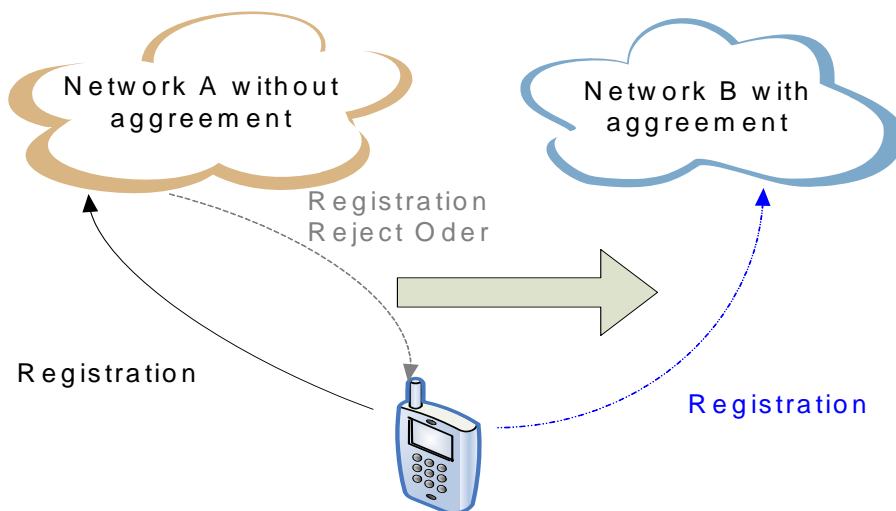
Req. #	Requirement	Category	Remarks	References
2.5	The MS shall have a UI menu item to allow the user to manually clear the System Avoidance List.	M	Should a currently unusable network be available in the future for international roaming purposes, the user has a mechanism to clear the list and proceed to acquire that specific system	

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Req. #	Requirement	Category	Remarks	References
2.6	If the MS cannot obtain any network after using 'Manual System Avoidance', it should provide a notification (e.g., no network available) or any other words that can let the user know there is no network available.	HD		

3. Appendix – Call Flow Diagrams

The following figures aim to provide a graphical depiction of several representative call scenarios, and show where in the call flow many (but not all) of the requirements apply. In the event of any conflict of interpretation arising between these diagrams and the main body text, the main body text shall prevail.



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