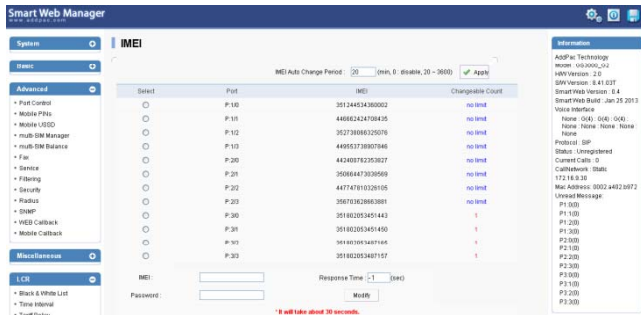


GSM Gateway Series



BTS Auto Change Service
(This software feature is only applicable in model which can change BTS)



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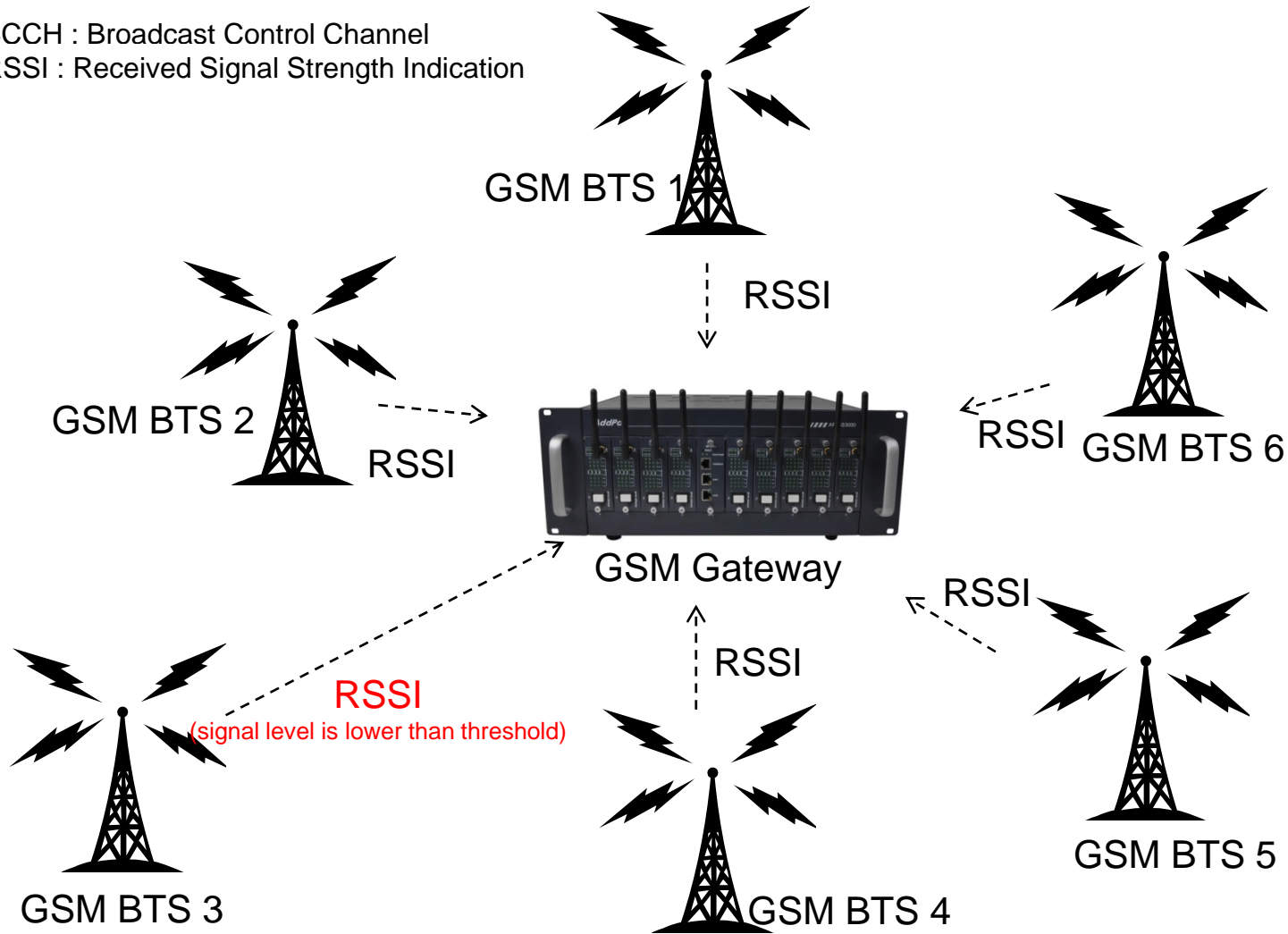
Contents

- BTS Auto Change
 - GSM Auto BTS Structure
 - Smart Web Manager for BTS Auto change
 - BTS Auto Change Algorithm



GSM BTS Structure

BCCH : Broadcast Control Channel
RSSI : Received Signal Strength Indication



Smart Web Manager for BTS Auto Change

Smart Web Manager
www.addpac.com

System +
Basic +
Advanced +
Miscellaneous -
• Mobile Summary
• Port & Call Status
• System Status
• Mobile Status
• Mobile Call Statistics
• Call Log
• System Log
• Ping
• Mobile Band
• **BTS Selection**
• GSM BTS Info
• Mobile BS Info
• multi-SIM Switch Log
LCR -
• Black & White List

Mobile / BTS Control

BTS Auto Change Mode: none RSSI Threshold: -1 (-90 ~ -30, dbm) Parameter: -1 (call-count: 5 ~ 3600, period: 5 ~ 3600 min)

Port	BTS Selection Mode	BCCH	Remains
P1:0	BCCH	1234	n.a.
P1:1	None	n.a.	n.a.
P2:3	None	n.a.	n.a.
P3:0	None	n.a.	n.a.
P3:1	None	n.a.	n.a.
P3:2	None	n.a.	n.a.
P3:3	None	n.a.	n.a.

P1:0 BCCH

'none' mode ONLY

BTS Auto Change can be set.

- none : the BTS is automatically selected by RSSI.
- call count based : If the GSM port's call-count -threshold is over, the other BTS is randomly selected.
- period based : Each port's BTS change will be uniformly dispersed. (reference next page)

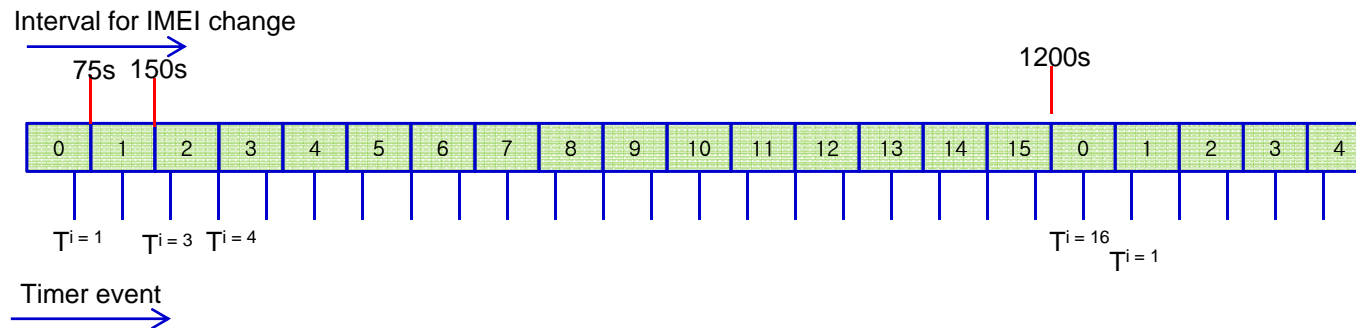
• Best Effort Service ; if a call is exist, after terminating it, BTS change will be executed.

BTS change can be set with BCCH.

- BTS manual change is possible with BCCH.
- 'none' mode ONLY

GSM BTS Auto Change Algorithm

If GSM Gateway has 16 GSM ports as below.



A timer(T^i) is called for BTS change every 60 seconds.

If a auto BTS change period is configured to 20 minutes,

Each Port's Interval is calculated as follows.

$$(Period * 60) / (number of port) = (20 * 60) / 16 = 75 seconds.$$

When $T^{i=1}$ event is occurred, BTS change is not executed.

When $T^{i=2}$ event is occurred, BTS change is executed for Port 0.

When $T^{i=3}$ event is occurred, BTS change is executed for Port 1.

When $T^{i=16}$ event is occurred, BTS change is executed for Port 15.

Each port's BTS change will be uniformly dispersed.

GSM BTS Auto Change Algorithm

- BTS random selection

Port	Information	SVC	N(1)	N(2)	N(3)	N(4)	N(5)	N(6)
0:0	BCCH	77	71	63	68	595	586	0
	RSSI(dbm)	-62	-78	-78	-89	-79	-82	-111

Random Selection Sequence

1. Read RSSI threshold parameter from manager
2. Discard neighbor cell that RSSI is lower than threshold
3. Random selection BCCH number
4. Registration to selected BTS

BCCH : Broadcast Control Channel

RSSI : Received Signal Strength Indication

GSM Gateway Series

Thank you!

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