Bulletin No.: 155_Wireless_Software_Update **February 5, 2007**

Samsung OfficeServ Wireless
New Software Release and Service Tips

Samsung Telecommunication America is pleased to announce new software releases for the OfficeServ Wireless products. These new software versions add many new features. A few bugs were fixed for the existing products. This bulletin also includes service tips to avoid common mistakes and to improve product user experience.

NEW RELEASE SOFTWARE

The following new software is available from Samsung technical support department for dealers. The brief descriptions on the software changes are provided for reference in next section.

Product	Version	Date Code
SMT-R2000 Dual-Band Wireless Access Point	V 2.03.00	12-28-2006
SMT-W5100E 802.11g Handset	V 01.02.00	01-31-2007
WIP-5000M 802.11b Handset	V 03.09.00	01-02-2007

MCP software should be v2.66 or higher for OS 100/500/7200 and v3.32 or higher for OS 7400.

Current product software version can be checked by using the following methods.

SMT-R2000 Dual-Band Wireless Access Point (AP)

- Associated the PC to the AP's SSID
- Logon to the AP built-in web server
    - Default IP address: 192.168.111.10
        - (Each AP must have different IP address for hand-off to operate properly)

- Default ID: admin
- Default password: samsung

- Firmware version is displayed under [Basic Settings]

SMT-W5100E 802.11g Wireless Handset

Two ways to check the software version:

1. [MENU], [8. System], [0000], [7. Version Info], or
2. [MENU], [HOLD], [*], [#], [1]

WIP-5000M 802.11b wireless handset

- [MENU], [HOLD], [*], [#], [1]

BRIEF DESCRIPTION ON THE SOFTWARE REVISIONS

SMT-R2000 Dual-Band AP

V2.03.00, 12-28-2006 (New Released Version)

- Added new antenna selection under Radio menu of the Web user interface.

Antenna Selection	External Antenna ON	External Antenna OFF
Diversity	Both external antenna and internal antenna 1 are active. Both indoor and outdoor are covered; however external antenna coverage is reduced.	Both internal antenna 1 and 2 are active. **Recommended configuration for internal antenna use**
Antenna 1 (Internal Only)	Internal antenna 1 is active	Internal antenna 1 is active
Antenna 2 (External)	Only external antenna is active; **Maximum coverage for external antenna use**	Internal antenna 2 is active

Note: SMT-R2000 AP is certified for any external 2.4 Ghz or 5 Ghz antenna with **6 dBi gain** or less.

- Fixed bug that calls could get dropped if handset moved to new AP and returned to the original AP in short period of time.
- Fixed bug that WDS (repeater mode) with WPA didn't work after reboot.

V2.00.00, 7-26-2006 (Current Released Version)

- Added clustering feature. For more details see the Service Tips section.
- Support for concurrent VLAN and untagged VLAN.
- Support multiple login for Web UI.
- Support external and internal antenna diversity.
- Added WPA support for WDS (repeater mode).
- Displayed signal level on neighboring APs.

V1.00.00, 2-22-2006

- Initial software release.

SMT-W5100E 802.11g Wireless Handset

V1.02.00, 01-31-2007 (New Released Version)

- Added support for 4 systems.
- Added "divert to the voice mail" feature. See Service tips section for more details.
- Added short message service (SMS) feature. Handset can send SMS to the handsets in the same system.
- Added call pick-up feature in the soft menu.
- Added support for 11 languages.
- Added two basic ring tones.
- Added feature that allows handset to answer the call by lifting up from the cradle.
- Added "base volume" to the [MENU], [4. Volume/Ring] item. This feature allows user to set the handset receiver or ring baseline volume to the desirable upper limit. Level 1 is soft and level 6 is loud. User can then adjust the volume up and down buttons to the maximum of the base volume level.
- Added self connection feature. This feature allows two handsets to conduct a voice conversation with a SMT-R2000 AP without a system.

V1.00.04, 11-10-2006 (Current Released Version)

- Initial software release.

WIP-5000M 802.11b Wireless Handset

V3.09.00, 01-02-2007 (New Released Version)

- Fixed bug that handset locked up occasionally.
- Fixed bug that displays envelop icon when missed a call.

V3.08.00 *(Not Released)*

- Fixed bug that call dropped occasionally.

V3.07.00 *(Not Released)*

- Fixed bug that caller name was not displayed or display a wrong name occasionally.
- Fixed bug that user couldn't answer the incoming call.

V3.06.00, 03-20-2006 (Current Released Version)

- Hand-off was improved.

DOCUMENTATION

Quick Reference Guides are available for downloading on the Samsung's GSBN website at http://www.samsunggsbn.com/

If you have any questions regarding this notice, please contact your Regional Sales Manager, your Customer Service Representative at the number provided below, or via email at BCS.Sales@samsung.com

TRAINING

Instructor led OfficeServ wireless training classes will be available within 60 days.

STA highly recommends that if you have no prior experience with deploying wireless access points or LANs that at least one technician from each interconnect attend this class.

Stay tune for upcoming training bulletins announcing dates here in Dallas, Texas.

Service Tips

This section provides additional Service tips for OfficeServ wireless products.
Many OfficeServ wireless issues are due to poor installation and configuration. Also interference from other 2.4 GHz wireless devices may affect the performance of the wireless network.

Fortunately, most of the issues can be avoided when equipped with proper knowledge.
The following addresses the common mistakes and provides the application ideas.

Wireless Access Point – SMT-R2000

Deployment

- Site surveys are required to determine the number of APs and the locations of the APs. This process is critical for the successful OfficeServ wireless deployment.
- Only 3 non-overlapping RF channels should be used for the 2.4 GHz 802.11b/g radio. Three non-overlapping channels are 1, 6 and 11. During the site survey, one should carefully assign the RF channels to avoid interference from nearby APs.
- AP or external antenna should be placed at height around 9 to 12 feet for optimal coverage.
- The SMT-R2000 is certified for any external 2.4 Ghz antenna with **6 dBi gain** or less.
- The orientation of the AP must be placed correctly; otherwise the coverage could be reduced to 50%. The SAMSUNG logo on the AP should always faced wall not ceiling or floor.
- No alternation on the cable length of the 5V power adaptor output.
- Each SMT-R2000 requires 200 mA at -48V. If a PoE switch is used, please be sure that the PoE switch has enough power to supply the APs. If PoE switch doesn't have enough power to supply to the AP, the LEDs on the AP appears to be working fine but it isn't. For example, the Netgear PoE switch that comes with the OfficeServ 100 demo kit can only power one SMT-R2000. When insert the second SMT-R2000, both APs will not work properly. If Samsung PLIM product is used, please use the power calculation program, which provided by Samsung, to determine the total number of the devices that the system can support based on the desirable configuration. In most of cases, if the PLIM is used on SMT-R2000s with the typical OfficeServ 7200 configuration the system will required OfficeServ 7150 external PSU for PoE.
- After the successfully installation, if the OfficeServ system starts to behave strange occasionally. Please check for other 2.4 GHz interference sources first before calling technical support department. The possible sources of the 2.4 GHz interference are Bluetooth devices, cordless phones, microwave ovens, security wireless video cameras, etc. Also, other wireless access point using the same RF channel in the same coverage area will affect the performance.

SMT-R2000 Software Upgrade

- From v1.0 to v2.03, all data base in the AP will be reset to factory default.
- From v2.0 to v2.03, the data base will be preserved.

SMT-R2000 Clustering Mode

- It is a simple centralized WLAN management feature. Administrator can change the configuration parameters to all the APs in the same cluster at once.
- This feature is very easy to use and self explanatory. After log-in to the AP built-in web server, click [Cluster], [Access Points], type in cluster name, [Start Clustering], and [Update]. Repeat the same process for each AP in the same network.
- The following parameters can be controlled by the clustering feature.
    - Basic tab
        - Country code
        - Standard time adjustment
        - New password
        - SSID
    - Cluster tab
        - Add user account
        - Channel plan
    - Security tab
        - SSID broadcast on or off
        - Station isolation
        - All security key WEP/WPA/WPA2
    - Mac filtering tab
        - Policy selection
        - Station list

Wireless Handset – SMT-W5100E

Software Upgrade

- Handset software (after v1.02) can be upgraded with or without an OfficeServ the system.

'#' Divert to the Voice Mail Feature

- While handset is ringing, user can press '#' key to divert the call to the voice mail box and stop ringing. To use this feature, administrator needs to set YES to "65:VM AME" which is under "usable feature" of MMC 701.

Station Pair

- MMC 217 can be used to station pair a desktop phone.

- There are several ways to manage the voice mail box and indication in the station pair case.

1. Method 1: Use Handset Mail Box only (recommended)
   - Both handset and desktop phone have voice mail indication.
   - Delete desktop voice mail box.
   - Assign a key from desktop phone to indicate MW to handset extension.
     STEPS:

     - **Switch**
       - MMC 217 to Pair Primary EXT with WIP EXT.
       - MMC 722 to assign MW 33xx Key (where 33xx = WIP EXT).
     - **SVMi**
       - In primary MBX on Page two set MWI Extension to 33xx (where 33xx = WIP EXT).
       - Setting up MWIs in this manor allows you to have the same MWI on both the WIP EXT and the Primary EXT. The downside is you will no longer have a Display with the number of new messages and the MWI on the top edge of the phone will no longer light when you have new messages.
       - In "Direct Station" Menu program 33xx TRAN 67xx (where 33xx = WIP EXT and 67xx = Primary EXT)
       - As long as WIP EXT is not going to be published, then No EXT and/or MBX Block is required in the SVMi

2. Method 2: Use Desktop Mail Box only
   - Only desktop phone have voice mail indication.
   - Delete handset voice mail box.
   - Modified VMS to allow handset '#' key (divert to voice mail) go to the desktop voice mail box.

3. Method 3: Use Group Station Function
   - Both desktop phone and handset have group voice mail indication.

Modify Handset User ID for Easy Management

- MMC 846 can be used to change handsets' user ID before registration for easy management. It is recommended to use phone extension number for the user ID. For example, change default user ID from 1212 to 3301 for extension 3301.
- Note that user ID for the handset must be 4 digits. If 3 digit extensions are used, please enter a leading zero to make-up 4 digits.

Voice Only Application

- Although OfficeServ wireless system can handle both voice and data, the system can be used for voice only application. There are many ways to configure the network for voice application only. The following provides some examples of the configuration. In many cases, IT department will need to be involved.

    1. Wired separate network for the OfficeServ system and don't connect the OfficeServ system network with the IT data network.
        1. If connection between two networks is required, a firewall should be used to allow only IP addresses of MCP and MGI to pass through the IT data network.
    2. The OfficeServ system shared the same IT data network
        1. Use MAC filtering features on SMT-R2000 to allow only handset IP packets to pass through.
            - This method is easy to configure but it is not very safe. The MAC addresses are easily spoofed.
            - From SMT-R2000 web UI,
                - select [Manage]->[MAC Filtering]
                - enter all handset MAC addresses
                - select "Allow only station in list"
        2. Use VPN for wireless data.
        3. Program firewall to allow only handset IP addresses to pass through.
        4. Program firewall and switch ports to block all ports except handset IP ports.
            - The following port are used by the OfficeServ Wireless:
                - PDHCP
                    - Server (system): 7000
                    - SMT-W5100E: 7001
                    - SMT-R2000: 7003
                - PA
                    - Server (system): 8000
                    - SMT-W5100E: 8001
                - LM
                    - Server (system): 10000
                    - SMT-W5100E: 10001
                - SIP
                    - Server (system): 5080
                    - SMT-W5100E: 5060

Self Connection

- This feature allows two handsets to have a phone conversation via SMT-R2000 without a system. This feature can be used to demo the OfficeServ wireless product or use it for the site survey.

- This feature can be activated as follow:
  1. Power up a SMT-R2000.
     - Example SSID is A.
  2. Enter the handset hidden mode by [MENU], [HOLD], [Q], [#].
     - Do it for both handsets.
  3. Select [10. AP Call Test].
  4. Enter IP addresses for handsets. For example:
     - Handset 1: 10.0.0.1
     - Handset 2: 10.0.0.2
  5. Enter System ID:
     - In this case: A.
  6. After handsets are connected to the SMT-R2000, enter destination IP address and MAC address for each other. Example:
     - From handset 1, enter handset 2 IP address and press [OK], then handset 2 MAC address and press [OK].
     - From handset 2, enter handset 1 IP address and press [OK], then handset 1 MAC address and [OK].
  7. Start conversation.

  Note: Press and hold key to enter numeric digits for MAC address.