

SCOPE™ DEVICE MANAGEMENT

Manage Complex Devices Intelligently with a One-Click Fix

Operators need a complete solution that manages their ever-growing pool of complex devices and services to take advantage of cost savings and revenue opportunities.

SCOPE™ enables you to cost-effectively program and update mobile device settings and gives front-line customer service representatives—or customers using an optional self-care portal—the ability to easily resolve device issues, dramatically improving customer care and reducing operating expenses. SCOPE™ makes updates simple by automatically identifying a device problem and employing a one-click fix.

➤ REDUCE CHURN AND OPERATING COSTS

With SCOPE™, subscribers obtain more satisfactory service, increasing loyalty to their service providers. Operators improve first-call resolution statistics, crucial to reducing churn, and lower costs associated with repeated calls.

According to J.D. Power and Associates, 17 percent of customers who contact their operator by phone two to three times regarding an issue are likely to switch service providers in the future. Just 10 percent of customers are likely to churn when the issue is resolved in the first contact.

increase first-call resolution

Level I support calls can cost operators \$1 or more per minute. Repeated calls to Level I technicians can add up quickly. By providing Level I service personnel with a powerful problem-resolution tool, SCOPE™ minimizes the need for multiple calls and reduces the need to involve Level II technicians, resulting in significant cost savings.

SCOPE™ provides all the benefits of simple service and network setting updates on the device, as well as support for advanced OMA-DM functionality, such as software and firmware updates over the air (based on the OMA FUMO specification)— all in one convenient solution. SCOPE™ enables you to test firmware update packages before making them live, further reducing potential customer issues.

SCOPE™ is a modular system, enabling operators to add next-generation technologies while supporting existing legacy solutions. The Application Programming Interface (API)-based



4 ways
to
deploy

CHOOSE FROM FOUR DEPLOYMENT OPTIONS

Interop Technologies offers four flexible deployment options:

Hosted—Share technology in a service bureau environment.

Modified Hosted—Deploy our solution at your site without capital expense; we manage it for you.

Turnkey—Purchase our solution outright for on-site deployment.

Turnkey with Managed Services—Purchase our solution outright; we handle operations and management.

All four options include our world-class technology, and our architecture enables easy migration from hosted to turnkey if and when your business requires a different strategy.

architecture allows multiple technology modules and external applications to simply be “plugged in.” Our modular architecture provides the flexibility for your system to evolve as your device requirements evolve, as well as the ability to manage all device-related activity through a common user interface.

➤ REPAIR SETTINGS FAST

The SCOPE™ One-Click Fix™ capability originates with the distinctive VersatileView™ User Interface (VVUI). Parameters for this permissions-based, intuitive diagnostics tool can be set to suit the skill levels and desired access levels of various user groups.

The VVUI can be configured to display only tasks related to common device problems for quick and easy troubleshooting, or reveal minute configuration details for analysis by highly technical personnel. Either way, disparities between operator default values and device settings for a given subscriber are flagged, enabling rapid problem isolation and resolution. With one click, a specific setting or an entire device configuration can be automatically repaired, eliminating the chance of human error.

In addition, the VVUI shows available firmware updates and release notes, making it easy for customer service representatives to make needed firmware updates to handsets. If you wish to use the Blast Manager to perform firmware updates in bulk, you can take comfort in knowing that SCOPE™ verifies whether updates are applicable for each target device. In addition to firmware updates, you can specify start time and retry preferences for everything from changing MMS settings to accommodating a network migration. Summary reporting provides a snapshot of blast progress and success rates, and drill-down reporting enables users to check on the status of individual devices within a blast.

➤ ENABLE SELF-CARE FOR CUSTOMERS

Using APIs, SCOPE™ enables an intuitive Web portal so subscribers can manage their own devices—without a trip to a retail location or the cost of a service representative’s time. Based on device capabilities, subscribers can view service issues and repair and update settings, check the status of their devices, and manage device security, minimizing customer service calls. Some self-care features can be initiated from devices, making it simple for subscribers to make changes when they are not near their computer.

Operators can build their own portal, or Interop Technologies can supply one as an option. Subscribers simply log on to the website and choose from a list of common problems. SCOPE™ does the rest, sending an over-the-air update to correct the problem.

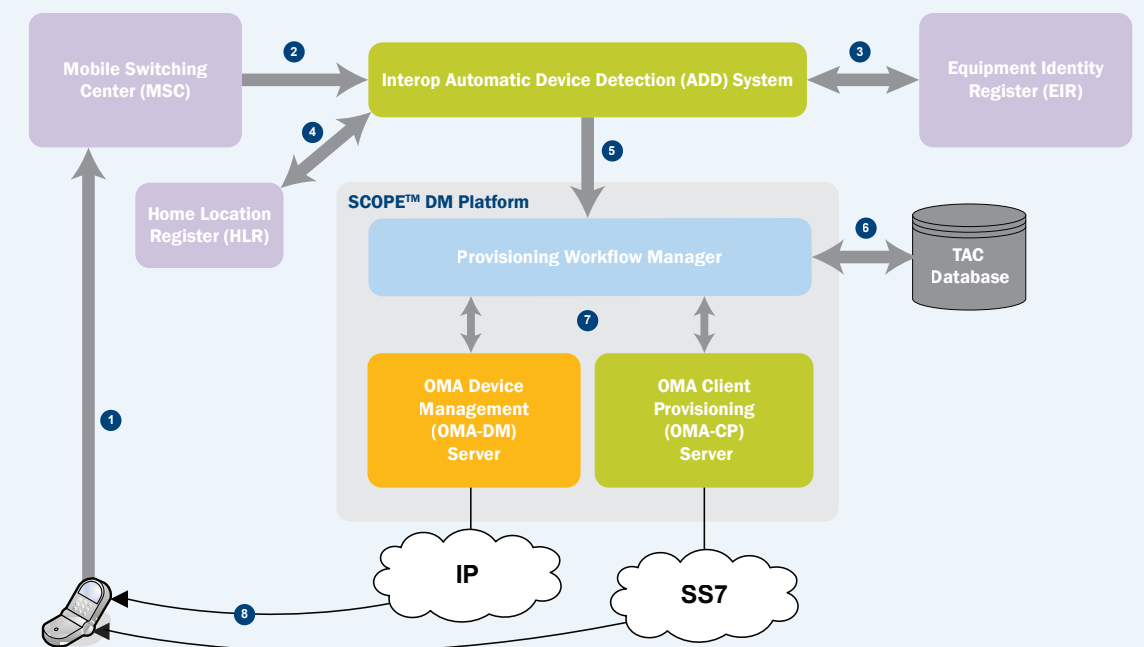
➤ SECURE YOUR DEVICES

SCOPE™ provides added security with an available “lock and wipe” function. For devices supporting the OMA Lock and Wipe Management Object (LAWMO), SCOPE™ can issue a command over the air to lock down or even wipe sensitive data from a lost or stolen device to prevent unauthorized access.

let
subscribers
self-care

Automatic Device Detection (ADD) for GSM Networks

Available on GSM networks, Automatic Device Detection (ADD) detects new devices that register on your network and follows a pre-programmed series of actions to provision and configure the device, based on information derived from the handset, including the IMEI, IMSI, and MSISDN. SCOPE™ determines the course of action based on device capabilities, which may include OMA-DM, OMA-CP, and firmware updates, saving you resources and operational costs.



Automatic Device Detection Flow

- 1) Mobile device attaches to the network.
- 2) The MSC sends a Check IMEI request to the Interop ADD system, which acts as an EIR proxy.
- 3) If an EIR is present, the ADD system sends a Check IMEI request to the EIR, obtains a response, and forwards the response back to the MSC.
- 4) If the MSISDN is not passed in the initial Check IMEI request from the MSC, the ADD system will query the HLR.
- 5) If the detected device is deemed new, the ADD system passes the “triplet” containing the IMEI, IMSI, and MSISDN to the SCOPE™ system.
- 6) The SCOPE™ system queries the TAC database to determine the device make and model based on the IMEI.
- 7) The Provisioning Workflow Manager initiates device provisioning with the appropriate server(s) based on the device capabilities and the configured workflow.
- 8) The device is provisioned over the air using the appropriate server.

➤ CDMA PROVISIONING USING OMA-DM

The Interop Technologies SCOPETM solution provisions and activates devices in CDMA environments based on TIA-1059, IP-Based Over-the-Air Device Management (IOTA-DM) for CDMA2000[®] Systems.

These activities, which have historically been conducted using SS7 device connectivity, can now be performed over the IP network using the OMA-DM protocol. This includes the configuration of the MIN, MDN, NAM, and PRL settings, as well as other parameters described in IS-683. Interop's innovative and leading-edge system supports both methods of DM-based CDMA device programming—direct programming via OMA-DM and IS-683 encapsulation over OMA-DM by leveraging Interop's IS-683 provisioning platform.

➤ TECHNICAL DETAILS

- OMA-DM v1.1.2 and v1.2 compliant
- OMA-CP v.1.1 compliant
- FOTA (Firmware Over the Air) support via OMA FUMO (Firmware Update Management Object)
- OMA SCOMO (Software Component Management Object) v1.0 compliant
- IS-683 compliant for OTAPA/OTASP
 - SS7-based OTA solutions

➤ PROVEN PARTNER

Interop Technologies has a proven track record and is a trusted business partner. We are well-positioned to support the next generation of core technologies whether in the wireless, broadband, or traditional telecommunication space

KEY BENEFITS

- Increased customer satisfaction
- Improved first-call resolution statistics
- Reduced customer care and technical support costs
- More efficient use of higher level technical staff
- Capability to accommodate the growing complexity of handsets
- Seamless integration with Interop Technologies' CDMA OTA solution
- Compliant with OMA-DM, OMA-CP, FUMO, and SCOMO standards

RED BEND CERTIFIED

SCOPETM has achieved interoperability with Red Bend Software's vRapid Mobile[®] vDirect MobileTM client software, deployed in more than 1 billion mobile devices worldwide.

