



Vulcan Voice

CTG helps you improve application quality and productivity

Overview

New developments in voice recognition technology are paving the way for improvements in quality, productivity, and cost in processes as diverse as order picking, quality inspection, and manufacturing. CTG's Vulcan Voice technology takes advantage of off-the-shelf, commercially available hardware to make voice technology cost-effective for a wider group of applications than ever before, including asset management; maintenance, repair, and overhaul; manufacturing; retail/wholesale; and warehousing and distribution.

Vulcan Voice features include:

- **Hands-Free; Eyes on Task:** Speech-directed operations allow users to listen while they work, keeping their eyes on the task and both hands free. Voice solutions improve operator safety while offering a 10% to 60% improvement in productivity and 99%+ accuracy in item selection.
- **High-Quality Speech:** Vulcan Voice incorporates digitized voice technology in its speech engine to provide a true human voice instead of the mechanical-sounding output of older voice applications. A pleasing variety of male and female voices is available for several languages, including English, Spanish, French, and German.
- **Excellent Voice Recognition:** Vulcan continuously adjusts for ambient noise conditions, eliminating the need for noise sampling and providing excellent voice-recognition in noisy industrial environments. It not only recognizes user commands but, through 'conversation filtering,' can ignore conversational speech and act on spoken commands only.

- **Device-Independence:** Designed to run on Windows CE, Windows Mobile, and Windows XP, Vulcan Voice operates on virtually all voice-enabled, mobile and stationary computers, from rugged industrial handheld devices to PDAs and desktops.

The operator can also use any noise-canceling headset, eliminating the need for proprietary equipment when adding text-to-speech and speech recognition functionality to enterprise systems.

- **Multimodal Applications:** Vulcan Voice provides a truly multi-modal environment; switch from voice direction to keyboard/screen interaction, to bar code scanning, to RFID—freely and seamlessly.
- **Ease of Use:** Proven to work for a variety of regional accents, Vulcan's speaker-independent voice recognition means no time lost 'training' a device to recognize a specific speaker or accent. There's no need to configure a headset or mobile computer; the user simply picks up any device and starts work immediately.
- **Robust Interface:** Vulcan Voice's real-time interface ensures current information for all systems requiring user data. If communications are interrupted for any reason, Vulcan Voice stores pending information and periodically retries data transfer.

In environments without continuous RF coverage, Vulcan Voice implements a standard store-and-forward interface. To facilitate the interface with the user's application, Vulcan Voice provides a robust API that can be invoked by standard 3GL or 4GL managed or unmanaged rapid development platforms like the .NET Framework C#, VB, C++, etc.



Vulcan Voice Multimodal Approach

With proven advantages over paper-based operations, voice-enabled solutions improve customer service while reducing operational costs and delivering significant productivity and efficiency gains. Vulcan Voice's integrated, multi-modal approach offers all the benefits of voice direction while maintaining the flexibility to use other technologies where appropriate.

Specialized voice-enabled systems of the past used proprietary hardware and software optimized for a single task. They couldn't be used elsewhere in the enterprise, and their voice-only design biased their data capture capabilities. By contrast, Vulcan Voice marries rugged mobile computers on a standard software platform with integrated scanners, keypads, displays, and touch pads plus robust next-generation voice recognition software to deliver all the benefits of dedicated voice devices without their limitations. It lets you:

- **Use the appropriate technology:** Users can call up voice-based instructions when it's faster for them to hear instructions than to read displays. They can employ voice input to capture data or confirm an activity. They can use the screen to scroll through lists for form-based data capture or the bar code scanner or keyboard to capture complex data.
- **Optimize labor allocation:** Multimodal data capture capabilities allow supervisors to dynamically allocate employees throughout the day. Because not all applications are suited to a voice-only interface, it's more

cost-effective to equip employees with devices that are easily switched to other modes as required.

- **Utilize the same devices across different shifts and purposes:** Since multimodal voice-enabled solutions can run multiple applications, investment costs can be spread over multiple business areas rather than tied to a specific operation. Shared use eliminates the need to purchase duplicate devices, further reducing the cost of operations.

Sample Applications

A wide range of industry-specific applications are ideally served by Vulcan Voice and an appropriate handheld computer. They include:

- **Route accounting:** Track your goods closely, from dispatch to onsite servicing to end-of-day reconciliation.
- **Field service:** Achieve faster response times, faster problem resolution, and reduced travel costs.
- **Manufacturing and warehouse operations:** Collect data in real time; move material receipts, work-in-process inventory, and finished goods into and out of the facility more efficiently and improve margins.
- **Retail operations:** Keep retail store managers, clerks, and supervisors on the sales floor.
- **Healthcare:** Optimize asset tracking, verification and update of cleaning and calibration data, and patient tracking.

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Backed by over 40 years' experience, CTG provides IT staffing, application management outsourcing, consulting, and software development and integration solutions to help clients focus on their core businesses and use IT as a competitive advantage to excel in their markets. CTG combines in-depth understanding of our clients' businesses with a full range of integrated services and proprietary methodologies supported by an ISO 9001:2000-certified management system. Our thousands of IT professionals, based in an international network of offices in North America and Europe, have a proven track record of delivering solutions that work.

More information about CTG is available on the web at www.ctg.com.

