



#### Enterprise Web Application 'In-a-Box'

## i-Shakti PDA

**Hindustan Lever Ltd (part of the Unilever Group) has been taking part in an innovative scheme to train people from rural India in business skills, whilst creating a new sales channel for its products. Project Shakti (meaning 'strength') connects self-help groups with business opportunities and offers the groups the chance to become very local, small-scale sellers of the company's products. Tessella is working for Unilever Research and Hindustan Lever Ltd on the online component of the project – known as i-Shakti.**

#### Business Problem

Hindustan Lever's vision for i-Shakti is to catalyze rural development through increased business and health awareness, dissemination of general knowledge through online learning and by promoting community sharing of best practice across regions.

Many of the customers of project Shakti live in remote parts of rural India and they often find it difficult or inconvenient to travel to their nearest i-Shakti enabled store.

In an effort to take i-Shakti to its customers, Unilever and Hindustan Lever wanted a PDA version of the i-Shakti system that was capable of disconnected operation and provided many of the services of the main PC-based system.

#### Tessella's Solution

The platform chosen to host the mobile version of the i-Shakti system was a Compaq iPaq 2210 PDA running Pocket PC 2003, together with an IBM micro drive expansion card that offered up to 1GB of permanent storage. This vital upgrade protected the application's data from loss due to battery failure – a common PDA limitation.

The application itself was developed using embedded tools from Microsoft. Employing a kiosk-mode look-and-feel with an 'interactive web site' user interface ensured that the application mirrored the desktop version of the i-Shakti system. Using an on-board database developed with Microsoft's SQL Server CE, the mobile application can implement much of the process logic of its parent system and ensure that the integrity of vital business data is maintained.



The decoupled nature of i-Shakti demanded a robust system for data synchronization and consequently a full implementation of this subsystem is provided with the PDA application. The process of uploading data captured on the PDA and downloading any new data or changes to the 'website' is fully automated and integrated with the rest of the i-Shakti network.

### Results and Benefits

The PDA version of i-Shakti provides its customers and users a complete enterprise web application 'in-a-box'.

The system uses an on-board database to maintain its business data thereby allowing it to operate in areas where a connected system would fail, for example where mobile communication networks are poor or do not exist.

Synchronization of business data and resources between the device and its host computer is fully automated, thereby ensuring that the PDA system is integrated seamlessly with the rest of the i-Shakti system.

**Tessella plc** 26 The Quadrant, Abingdon Science Park, Abingdon, Oxfordshire OX14 3YS, UK  
T: +44 (0)1235 555511 | F: +44 (0)1235 553301 | E: [info@tessella.com](mailto:info@tessella.com)

**Tessella Inc** 233 Needham Street, Suite 300, Newton, MA 02464, USA  
T: 1 617 454 1220 | F: 1 617 454 1001 | E: [info@tessella.com](mailto:info@tessella.com)

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