

NIBBLE SALES MANAGEMENT SYSTEM



Solution Overview
2010



Nibble Sales Management System

Solution Overview

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Introduction

The present document provides a general overview of Nibble Sales Management System, a web-based solution which offers a complete set of tools to manage sales processes.

From Customer Accounts to Billing Operations through Inventory, Sales and Services the system streamlines all the related business processes tracking full-detailed information and provides real-time access to critical business data for all the involved actors.

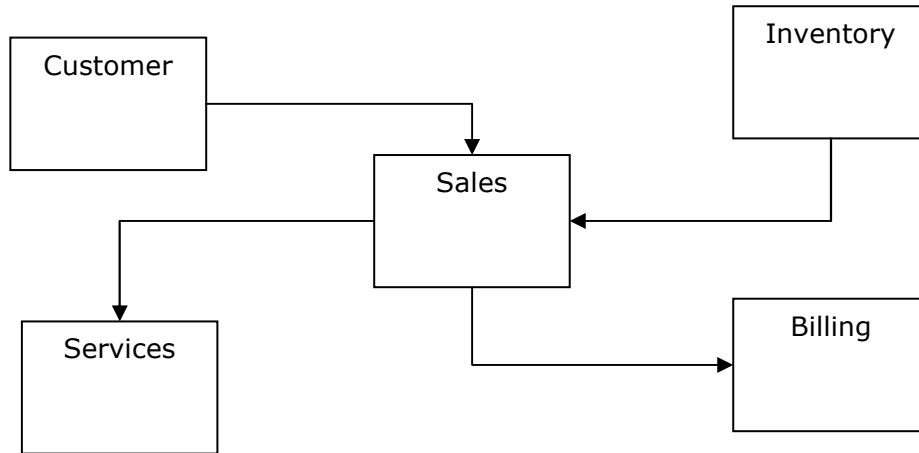
An optional module provides the ability to create an interactive connection between the business and the public through a website integrated with the main solution.

The system is built from a set of standard modules which can be fully customized to meet any target business and special requirements.

The solution is built on a flexible and highly scalable software architecture based on the Nibble Application Framework, a set of run time services and templates used to speed up the solution development, and on industry-standard products and technologies like Microsoft database server and application development tools.

Solution Overview

Business Management module



The system implements the following main functions:

- Customer
 - Manage customer account
 - View related info: sales, purchased units, billing
- Inventory
 - Products (model, description, price)
 - Warehouse Locations
 - Orders
 - Load/Unload items (unit s/n, date, from/to location)
- Sales
 - Create Sale (customer, date, sale rep, etc.)
 - Manage sale items (product #, product S/N, quantity)
 - Additional charges or discounts
 - Generate bill and delivery order (pickup/delivery, installation)
- Services
 - Create Service Request (Unit s/n, problem description)
 - View/assign pending requests
 - Execute service and enter report
 - Search the services knowledge base
- Billing
 - Review customers balance
 - Track Payments (date, amount, type)
 - Print Invoices/statements
- Reporting
 - Real time data access
 - Multiple format: dashboard, online reports and data export to MS Excel supporting fully customizable multi-dimensional data analysis



Marketing Module

In addition the solution can offer access to the public by adding a corporate website interface including:

- Information Pages
 - Company information
 - Locations and working times
 - Showroom
 - Products lines
- Marketing Services
 - Contact request form
 - Profiled content
 - Surveys
 - Product & Services Feedbacks forms
 - Require product info or availability
- Online Catalog
 - Browse products by category/sub category
 - Free text Search
 - Advanced search by attributes
 - Display products with specs, description, pictures, price and availability
 - Access manufacturers information
 - Run discount promotions
- Customer Services
 - Retrieve account info, balance, units purchased, pending transactions
 - Request for service on a specific item
 - Search products knowledgebase

Website Content Managing

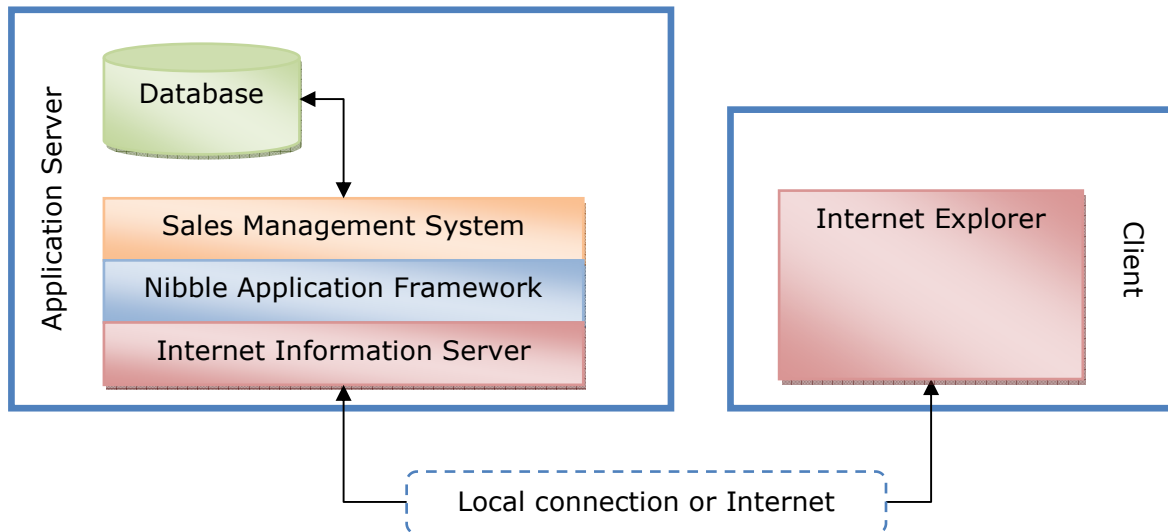
Website content creation and managing is done through a set of online editing tools which are provided by Nibble Application Framework; main user functions offered:

- On page text editing and formatting
- Easy picture upload and processing
- Create new pages based on templates (no limit)
- Multi-level dynamic menu editing
- Advanced content rendering components gallery
 - Rotating pictures
 - Items Lists with conditional displaying
- Advanced services
 - Media Gallery with Slide Show
 - Documents Library
 - Automatic Site Map
 - Free text search
 - Online surveys
 - Forums
 - News system
- Multi-language support



Solution Architecture

Architecture Diagram



The system is hosted on a central server running a Windows platform (Windows XP Professional or Windows Server 2003/2008); users access the application from a generic web browser; the connection is based on internet protocol (HTTP); both local or remote connections are supported.

Architecture Advantages

The solution architecture offers the following advantages:

Low deployment and maintenance costs

Even if accessed by many users from different locations the system can be fully managed and maintained by operating on the central server; no intervention is required to install or maintain workstations.

Access from anywhere

Users can access the system from any workstation running a generic Web Browser (Internet Explorer is recommended) support both local and remote connections through the internet.

Mobile devices support

Thanks to the adoption of standard communication protocols (HTTP) a user interface for mobile devices such as Pocket PC or Blackberry can be easily added.

High Data Security

End users can access the system data ONLY through the application layer which implements appropriate business rules to allow only authorized operations based on the actual user permissions; no direct access to the physical database is needed; no virus present on the client computers can affect the back-end system.



High System Reliability

The centralization of the data allows efficient monitoring and backup procedures; no data is stored on clients.

Low bandwidth requirement

The communication between the clients and the server is based on the same protocol used for general internet browsing (HTTP) which has a very low bandwidth requirement; such approach reduces the traffic on your local network and keeps the system responsive even when used from remote locations.



Solution Details

Here is a brief description of how the main system modules work

Inventory

The itemized inventory system allows tracking every single item as a unique piece based on the original manufacturer serial number; the system can generate serial numbers and print related barcodes when these are not provided by the manufacturers.

Items are easily loaded in the Inventory on order arrival by entering/scanning products product number, serial numbers and other info (cost); partial order delivery is supported.

Items are unloaded from the inventory at delivery time; the delivery order shows the items to be delivered and the locations where these can be found; full details of delivery and installation can be tracked.

A graphical view allows displaying the actual warehouse layout and physical locations; a built-in designer allows customizing the layout; example of information you can get any moment:

- which items are contained in any location
- in which location can I find this specific item (given a serial number)
- in which locations can I find any item for a given product model number
- what was the value of the inventory at a given date
- where was a specific item at given date
- full transactions history of a specific item
- which products are low in stock

Full support for bar codes scanning and printing

Sales

Manage the entire sale process from collecting information on a new customer or retrieving the account for an existing one; selecting the items, calculating the price, applying discounts, entering any additional information (financing, delivery directions, etc.); the tracked information generates a the bill and a delivery order.

Billing

Manage bills, invoices, and track payments; at any time, authorized users can get information about outstanding invoices, customer balances, retrieve/print invoices, statements.

Services

Track product services by retrieving the exact unit and attaching a service request; describe the issue, other request details and optionally assign a technician; technicians can quickly retrieve the pending requests list and work on them; once the service is provided, the technician can enter the service details and close the request; request can be linked together to create an incident.



Information on solved issue is stored in the database and can be searched to speed up future problems resolution.

Customer

The customer module includes the follow functionalities:

- retrieve a customer record by different search methods
- view/edit customer record fields
- view attached sales, unit purchased and related services
- view billing status: done/pending payments, balance

System Management

A set of run time services included in the solution will ensure proper system reliability and manageability:

- **Nibble BackupCtrl**; this tool automatically executes data backup using external HD; the tools performs a number of functionalities including: backup size calculation, backup unit presence and free space, backup output file verification, backup history cleaning and full email and web reporting.
- **Nibble Monitoring Tools**; a set of tools performs constant automatic checking of the critical part of the system including: memory and disk free space, backup and other jobs execution, network connection and devices availability, system event log errors and warning.

In addition the web application itself is configured to immediately report errors to our technical support.



Sample Screenshots

This section shows some examples of system screens; displayed figures and data are not real.

Product Details

Search To do QSale! Sale! Svel Delivery Service Customer Product Invoice
HOME | CUSTOMER | DELIVERIES | SERVICES | WAREHOUSE | RESOURCES | SETUP | USER | ADMIN | admin@nibblecs.com

FOSTER - 1912061 ALIEN [Product Specifications](#)

List Add New Map Parts Usage

Product ID # 8335

Created by _____ on **9/4/2007 1:25:28 PM**

Product Code: Make

Manuf. Status: Min Stock Units:

Category: Model Num.:

Short Desc.:

Price: (495.00 VAT incl.)

Avg. Cost: (267.67 VAT incl.) Margin: 45.92% (Markup 84.93 %)

Save Data Delete Label Mode: Load

1

Manufacturer	In House			Delivered	
Active Orders 0	In Stock 13	Deliveries 3	Plan 10	On the Truck 0	Customer 3
Pending Orders 0	Locked 0		Qty <input type="text" value="0"/> Add to Order		Sales 6

2

Units in Stock: Product items present in the warehouse (not including locked ones).

ID	Serial Number	Cost Order Num.	Shipped	Location	Moved On
#326	DKSN20080715165703			Office	7/15/2008
#327	DKSN20080715165723			Office	7/15/2008
#328	DKSN20080715165745			Office	7/15/2008
#1051	DKSN20090105130328	232.76 V2/90492	8/13/2008 7:28:17 PM	Office	1/5/2009
#1052	DKSN20090105130407	232.76 V2/90492	8/13/2008 7:28:17 PM	Office	1/5/2009
#1053	DKSN20090105130430	232.76 V2/90492	8/13/2008 7:28:17 PM	Office	1/5/2009
#1054	DKSN20090105130452	232.76 V2/90492	8/13/2008 7:28:17 PM	Office	1/5/2009
#1055	DKSN20090105133958	232.76 V2/90492	8/13/2008 7:28:17 PM	Office	1/5/2009
#1056	DKSN20090105134033	232.76 V2/90492	8/13/2008 7:28:17 PM	Office	1/5/2009
#1057	DKSN20090105134152	232.76 V2/90492	8/13/2008 7:28:17 PM	Office	1/5/2009
#1058	DKSN20090105134216	232.76 V2/90492	8/13/2008 7:28:17 PM	Office	1/5/2009
#1059	DKSN20090105134232	232.76 V2/90492	8/13/2008 7:28:17 PM	Office	1/5/2009
#1060	DKSN20090105134252	232.76 V2/90492	8/13/2008 7:28:17 PM	Office	1/5/2009

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1. Product properties editor: code, manufacturer, category, description, model num, price
2. Inventory information: number of products in pending orders, in stock, planned to be delivered, currently delivering and installed by the customers
3. Example of "In stock" view showing all the related items with s/n and locations



Order Arrival

Search To do QSale! Sale! Svcl Delivery Service Customer Product Invoice
HOME | CUSTOMER | DELIVERIES | SERVICES | WAREHOUSE | RESOURCES | SETUP | USER | ADMIN | admin@nibblecs.com

Tracking Order Arrival

1

Order #169

Pending Items | searchSearch

Op.	Code	Make	Category	Model Num.	Ordered Qty	Arrived	Left
Arrived	DKPC20080715152950	FOSTER	Sinks	1010008 ROUND SINK	5	0	5
Arrived	DKPC20080715152802	FOSTER	Sinks	1010060 ROUND SINK	5	0	5
Arrived	FAKE000008348	FOSTER	Sinks	1144000 S.1000	10	0	10
Arrived	DKPC20080813191526	FOSTER	Sinks	1211090	1	0	1
Arrived	DKPC20080813191325	FOSTER	Sinks	1218890	2	1	1
Arrived	DKPC20080813191427	FOSTER	Sinks	1267860	2	0	2
Arrived	1555600-651000000	FOSTER	Sinks	1555600 URAGANO	5	0	5
Arrived	1579660651000000LOC000020	FOSTER	Sinks	1579660 TORNADO RT	5	0	5

Track Arrival

Make

Code

* Location <select>

Category

Model N.

* Cost

* S/N

Make Arrived Cancel

Arrived Items

ID	Op.	Make	Category	Model Num.	Serial Number	Cost	Location	Date
#1067	Delete	FOSTER	Sinks	1218890	DKSN20090114151635		Customer	1/14/2009
#1051	Delete	FOSTER	Sinks	1912061 ALIEN	DKSN20090105130328	232.76	Office	1/5/2009
#1052	Delete	FOSTER	Sinks	1912061 ALIEN	DKSN20090105130407	232.76	Office	1/5/2009
#1053	Delete	FOSTER	Sinks	1912061 ALIEN	DKSN20090105130430	232.76	Office	1/5/2009
#1054	Delete	FOSTER	Sinks	1912061 ALIEN	DKSN20090105130452	232.76	Office	1/5/2009
#1055	Delete	FOSTER	Sinks	1912061 ALIEN	DKSN20090105133958	232.76	Office	1/5/2009
#1056	Delete	FOSTER	Sinks	1912061 ALIEN	DKSN20090105134033	232.76	Office	1/5/2009
#1057	Delete	FOSTER	Sinks	1912061 ALIEN	DKSN20090105134152	232.76	Office	1/5/2009
#1058	Delete	FOSTER	Sinks	1912061 ALIEN	DKSN20090105134216	232.76	Office	1/5/2009
#1059	Delete	FOSTER	Sinks	1912061 ALIEN	DKSN20090105134232	232.76	Office	1/5/2009
#1060	Delete	FOSTER	Sinks	1912061 ALIEN	DKSN20090105134252	232.76	Office	1/5/2009

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1. Products in the order: code, manufacturer, category, model num, ordered qty, arrived, left
2. Arrived items: product info + actual serial number(*) and cost

(*) when registering arriving products, the serial number can be entered or scanned; if missing it can be generated and printed on a label on the fly.

Customer Details

Search To do QSale! Sale! Svc! Delivery Service Customer Product Invoice
HOME | CUSTOMER | DELIVERIES | SERVICES | WAREHOUSE | RESOURCES | SETUP | USER | ADMIN | admin@nibblecs.com

Smith, John 1,830% click here to see customer details 1

[Sales](#) | [New Sale](#) | [Quick Retail Sale](#)

ID	Purchase Date	Sale Type	Project	Units	Pend.	TotPrice	TotCost	TotMargin	Profit %	Billed	ToBill
#4395	5/19/2008	Kitchen Package		5	0	48,366.96	2,506.49	45,860.46	1,829.67	48,366.96	-0.00
				5	0	48,366.96	2,506.49	45,860.46		48,366.96	0.00

Services

ID	Make	Model Num.	Request Date	Service Type	Service Date	Service Status	Solved	TotPrice	TotCost	TotMargin	Billed	ToBill
none												

Bills

BillID	BillDate	BillDesc	Sale	Service	Invoice Number	Amount
#588	5/19/2008	50% deposit on kitchen package quote of April 23, 2008	#4395		2008-382	24,183.48
#1036	9/22/2008	40% STAGE PAYMENT	#4395		2008-691	19,346.78
#1294	11/27/2008	Final 10% on kitchen	#4395		2008-936	4,836.70
						48,366.96

Invoices | [Add New](#)

ID	Date	Number	Customer	Due Date	Net Amount	VAT	VAT	Gross Amount	Payments	Left
#398	5/19/2008	2008-382	Smith, John	5/19/2008	24,183.48	0.15	3,627.52	27,811.00	0.00	27,811.00
#804	9/3/2008	2008-691	Smith, John	9/22/2008	19,346.78	0.15	2,902.02	22,248.80	22,248.80	-0.00
#1053	11/27/2008	2008-936	Smith, John	11/27/2008	4,836.70	0.15	725.51	5,562.21	0.00	5,562.21
									22,248.80	33,373.21

Units

Delivery	Sale	Purchase Date	Make	Category	Model Num.	Status
#8803	#4395	5/19/2008	FOSTER	Sinks	1218890	Warr Expired
#8800	#4395	5/19/2008	SMEG	Ovens	SE985X-7	Warranty
#8799	#4395	5/19/2008	ERREBI	Kitchen Collection	Spoon Oak	Warranty
#8802	#4395	5/19/2008	SMEG	Hobs	SRV596GK5	Warranty
#8801	#4395	5/19/2008	SMEG	Dishwashers	STA6148	Warranty

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1. Customer contact and account information (hidden in the screenshot above)
2. Customer tracked information: sales, services, bills and invoices
3. Purchased units with warranty information



Platform Requirements

The required platform specifications depend on the actual solution design and the estimated workload (number of users, database size...); as a general indication here are two different options for the server:

Entry Level Server

- Core Duo CPU 1.8Mhz, 4GB RAM, 100GB disk
- Windows XP Professional
- Ext. Hard drive for backup 100GB
- Supports
 - o up to 8 concurrent web application users
 - o no support for the Marketing Module

Small Business Server

- Core Duo CPU 2.4Ghz, 4GB RAM, 250+250GB RAID mirror disk
- Windows Small Business Server 2003/2008Standard (5CALs), Windows Server 2008 Foundation
- Ext. Hard drive for backup 250GB (at least 2 recommended)
- Supports
 - o More than 8 concurrent web application users
 - o Full support for the Marketing Module
 - o Advanced Mail and Team Collaboration Functions (MS Exchange Server)
 - o Document Management (Windows SharePoint Services)
 - o Domain Security and sharing (MS Active Directory)
 - o Network Services (DHCP, DNS, VPN...)

Clients and connectivity

- Local network connection (100Mbit or higher) or Broadband Internet Connection
- Windows XP + Internet Explorer 8.x (recommended) or any generic workstation with a full featured Internet Browser (e.g. a Chrome, Firefox, Safari)



Solution Implementation

Implementation Steps

The solution is implemented by through the following steps:

- Requirements Analysis & Draft Solution Design
 - collecting and understanding the requirements by mean of interviews with the customer
 - high level design of the solution defining all the components that need to be developed, and the activities required to deploy the solution
 - **Completing this step allows proper planning and cost calculation for the following steps.**
- Detailed Solution Design
 - Defining in details the database structure, the application modules user interface, the security and navigation models
 - Defining in details how to migrate data from any pre-existing system and how to initialize new data structures
 - Detailed definition of the software architecture of the solution
- Solution Development
 - Solution platform and Database creation
 - Application modules customization
 - Creation of Data migration procedures
 - Test and tuning
- Solution Deployment
 - Server configuration
 - Solution Setup
 - Data migration and initial feed
 - System documentation and Training

The actual deployment of the solution may require also the following:

- Hardware and software products specification and purchasing
 - Server HW & SW
 - Backup units
 - Internet domain registration

Adopted Components

Creating a solution instance is done through the adoption and customization of pre-existing components such as:

- Nibble Application Framework
 - System general run time services (user authentication and tracking, system administration tools)
 - User interface components and code libraries
 - Website Content Management tools
- Nibble Sales Management System solution
 - General implementation of sales management functions as described in the present document
- Microsoft Services
 - MS SQL Server 2000 for database management



- MS Internet Information Services for website publishing

Solution Ownership

Once completed, the solution instance is owned by the customer who is allowed to use it with no time and number of users (*) limitations within the business organization defined in the project contract; the customer cannot resell the solution as a whole or in part to any other party.

The pre-existing modules (Nibble Application Framework and Nibble Sales Management System Solution template) used by Nibble to develop the solution instance will remain intellectual property of Nibble Computer Solutions Inc who can freely reuse and resell them.

(*) although the licensing model doesn't put any limitation in the number of users that can access the deployed system, appropriate hardware and software upgrades may be required to support a workload bigger than the one targeted by the solution.