

White Paper



SiD Integrated Intelligence Solution

TECHNOLOGY OVERVIEW



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Integrated Intelligence Solution Technology Overview

Introduction

SiD is built on industry standard technologies. It fits seamlessly into your IT environment providing a secure intelligence database and communication with other information sources both within and external to your organisation. Database server choice is offered with Oracle or Microsoft SQL server.

SiD core technology is delivered in two modes. SiD EiS is the n-tier web service model. This model provides global communication flexibility via the web with security plug ins for authentication and encryption, plus options for disconnected operation. The second mode of operation is for heavy analytical use, operating in a more direct client server mode.

Our development direction is to provide all functional options on an n-tier web-services platform.

The following sections detail the key aspects of our technology in delivering an integrated intelligence solution with a level of technology that is appropriate (open and secure), flexible for rapid deployment, fosters buy-in from contributing agencies, and delivers exceptional intelligence value.

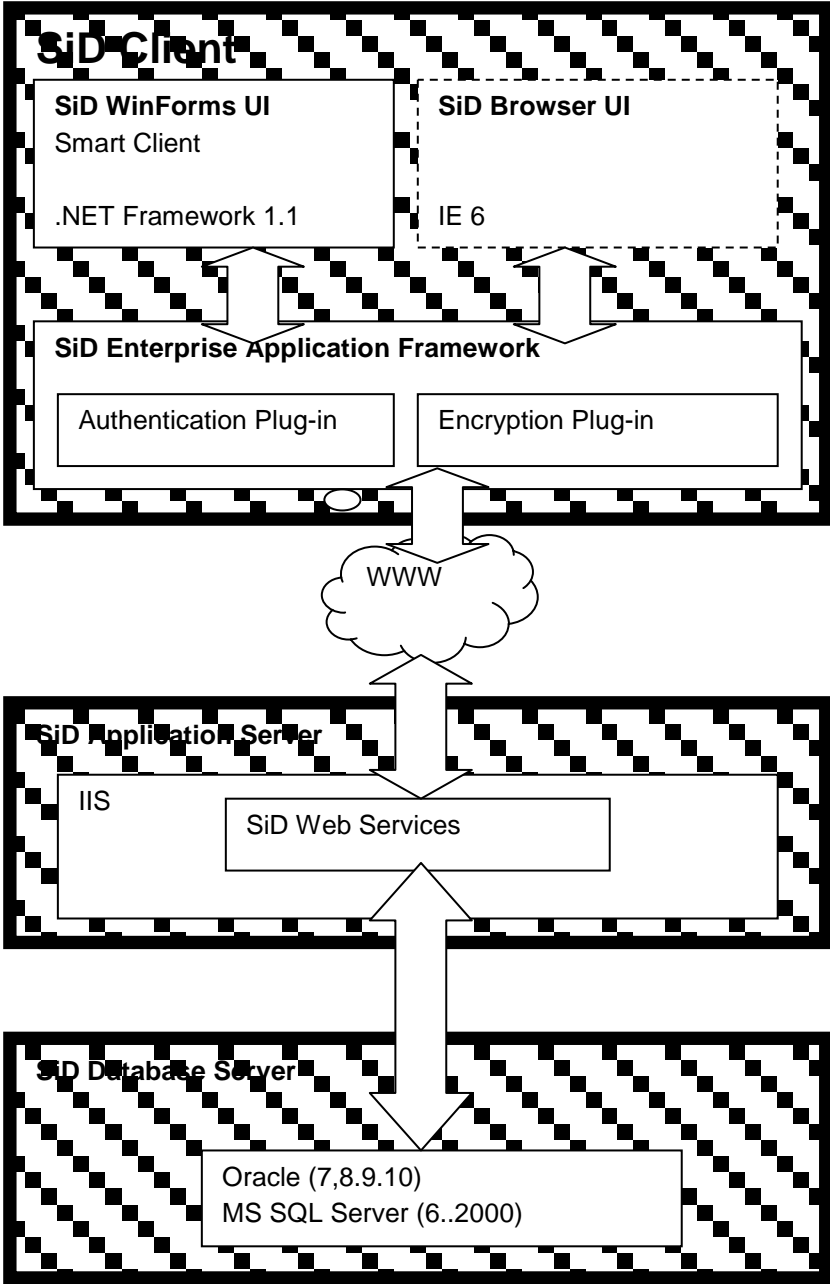
Key aspects:

- Industry Standard
 - Reliable
 - Secure
 - Scalable
 - Integrated
 - Interfaces
-

Industry Standard

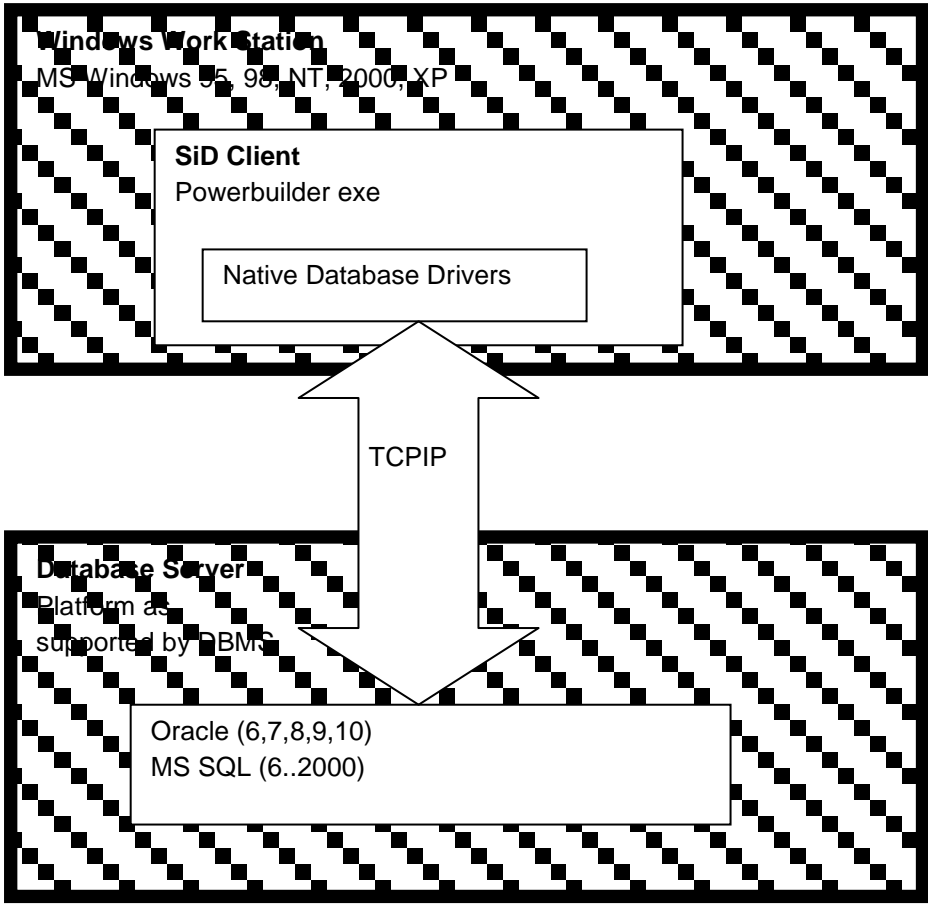
SiD EiS web services model operates with a scaleable application server layer on Microsoft IIS. SiD is currently offered on a Smart Client interface – with all the advantages of user interface power driven by Microsoft .NET client framework. The unique Application Framework underpinning the SiD application also allows minimal client delivery over a web browser. Data exchange is via XML – with an open standard for information exchange.

SiD n-Tier
Web Services
Model



**SiD Client
Server Model**

SiD client server components have been optimised for performance over enterprise wide area networks. Data compression is used to minimise network traffic – and performance has been proven on low bandwidth networks. The application has heavy stored procedure implementation at the server end – producing a “plump” client. The system is scalable from stand alone operation through to wide area network. Current implementations include multiple sites with nation-wide WAN operation. SiD clients range from Windows 95 through to Windows XP – with thin client Citrix meta-frame implementation a proven option.



Reliable

SiD has been used in mission critical operations since 1995. Such critical operations demand an extremely high level of software reliability. For new releases the product reliability is guided by a broad test strategy, including functional and performance benchmark tests, extended configuration and integration testing plus early release programs.

Secure

SiD uses both intrinsic data security provided by certified DBMS providers – plus additional hash access protection – which ensures access to the database is restricted to trusted database administrative activity. Military audits on SiD security have satisfied Secret classification levels, multiple industry security audits have certified SiD data security as suitable to protect information which may endanger the life of an undercover operative.

The plug-in capability for authentication and encrypted transmission have allowed SiD to operate with full smart-card (or biometric) authentication plus encryption standards as required for any classification level.

SiD provides fine-grain data security and silo partitioning – down to an individual item of information. Coupled with this, security groupings of users can be defined for access to various silos. This ensures any need-to-know security access requirements can be modelled for any organisation needs.

In addition to the physical security of data, SiD provides a multi-tiered functional security model that ensures specific users can only be allocated functions according to defined security groups. The entire security management model is under the control of the SiD Security Administration facility – which is controlled by authorised users within the organisation – entirely at the discretion of the organisation. The security model is fully customisable to the organisation structure and operational requirements. The model allows security of data down to an individual attribute of an object profile - which directly integrates with database schema security.

SiD's n-tier web architecture allows the system to securely send and receive information over the web. Part of this capability is the SiD Smart Forms, which can be remotely deployed to allow other agencies to submit information in a fully secure manner.

Security using a base level of HTTPS encryption has certification to FIPS140 level. However the plug-in capability provides virtually unlimited security extension.

SiD architecture has been developed with input from Government certified security specialists – and is supplied with a security risk matrix.

Scalable

SiD's EIS architecture is completely scalable at the Application Server level, allowing additional servers to be dynamically applied to application demand. In addition the SiD2SiD data transfer capability allows SiD information to be replicated from one database server to another.

In terms of client-server model deployment, SiD can be delivered on anything from a stand-alone laptop through to a large corporate WAN.

SiD data compression provides virtually unlimited document storage capacity (contained in compressed blobs in the database). No limit to the number of text items or images stored. Storage is only limited by the parent DBMS.

Integrated

SiD information exchange model relies on an extensible XML information schema which can be mapped into industry standard schemas – such as the USA Attorney General's Matrix project Regional Information Sharing System (RISS) protocol.

SiD's Import and Export Data Capability provides the capability to:

- share information between cooperating users of SiD, in a manner that is secure and easy to use
- bring information currently stored in another application used by your organisation into SiD and keep that information up to date
- bring Smart Forms intelligent data capture directly into SiD.

Enterprise Application Integration can be achieved rapidly with SiD's Secure Web Services through the use of the HTTP protocol and XML.

Interfaces

SiD provides interfaces to standard Microsoft Office products for uploading content from Word documents and spreadsheets. File Upload Types: Microsoft Office 95, 97, 2000, XP- which includes all file types supported by those products (txt, rtf, xls etc)

Interfaces to Image Viewer and Image Scan/OCR are provided. Image formats handled by SiD are JPEG, BMP, TIF, GIF, PCX, EPS, Zsoft, Mac PCT, Targa, WMF, WPG. Images can be cropped, sharpened, compressed, zoomed and cut/paste from/to other software.

SiD provides a seamless interface to I2 Analyst Notebook® for visualisation and analysis: i2 Analyst Notebook V4, V5 and V6.

A data definition and import facility is provided to describe the import formats of telephone call information from various telephone suppliers, and transfer a call log from raw telecom data.

SiD also provides a generic GIS Interface to output selected geo-coded data.

Software and Hardware Requirements

Database Server

SID provides multi-database compliance on either Oracle (7.3 – 8i) or Microsoft SQL Server (6 – 2000).

Supported platforms are as per Oracle or Microsoft database specifications for the selected database platform.

Server Hardware Specifications

Note: Consideration needs to be given to other applications or sharing of database resources where those applications are run on the same server

RAM: (Indicative) 50 MB for each user 1 GB for 20 Concurrent Users

Processor Speed: Min 1 GHZ Cycles dual processor

Disk Capacity: Initial: 200MB

Growth: 2MB per 100 Reports

1MB per 100 Profiles

10MB per 100 Images

Typical: 2.2GB with 20,000 reports per annum

Backup Capacity: Media capable of securely storing database information off-line for standard database recovery
Volumes to handle maximum database capacity above.

Client Specification

Currently two forms of SiD Client are provided – the SiD EiS Smart Client and SiD Client-Server plump client (Powerbuilder exe)

Hardware Standard Pentium client 600 MHz (512MB RAM) (for stand alone client-server database increase to 1GB RAM), 20MB disk for SiD client-server client.

Software Windows 95, 97, NT, 2000 and XP. IE6, MS Office 95-XP.
For SiD EiS Microsoft .NET Framework 1.1
