



Advanced Knowledge Acquisition System

Knowledge is Power

Introduction

4th Wave, a leading European E-commerce solution provider, has created the unique **ADVANCED KNOWLEDGE ACQUISITION SYSTEM - AKAS**.

This innovative Internet enabled suite of applications allows the intuitive creation of customised business tools that can collate and interpret data from across a wide geographic area.

Concept

Knowledge is power. **AKAS** is a rapid application development and deployment tool that gives you the power to build and administer knowledge driven on-line applications. Applications include:

- Corporate Intranets
- Market Research Programmes
- Sales databases
- Stock Inventories
- Product Catalogues
- Assimilation of election votes
- Assimilation of shareholder votes
- Multi Discipline Management
- Human Resource Management
- Software support
- Direct Mail Campaigns
- Clinical trials
- Company procedures
- Customer satisfaction surveys
- Sub-contractor Management control
- Multi Site Project Management

With **AKAS** you create the application that your business needs. As a Rapid Application Development tool **AKAS** is particularly suited to any process that involves stringent technical procedures, extensive data entry and rapid data retrieval from diverse geographical locations.

An easy-to-use Windows based Builder, expanding on 4GL concepts and technologies, AKAS puts you in control; producing customised forms and databases automatically. Complex solutions can be implemented in a matter of hours without previous experience of databases or programming.

Although **AKAS** can be used to tackle a wide variety of business situations, industry specific derivatives are already being targeted at particular market sectors, such as Clinical Trials and Market Research.

AKAS applications process and distribute knowledge by Internet or Intranet. They integrate easily into your existing business systems and deliver rapid cost savings. If speeding up the acquisition of knowledge to enable informed business decisions is paramount, **AKAS** can help.

AKAS Application Suite

AKAS - Security Administrator

This tool manages access to your applications. You can add, edit and remove permissions for individuals to allow them different rights over specific portions of your database. Users can have rights to view, edit, create, delete, validate or approve data. They only see the data specific to their job. Their rights may be granted individually or in groups, and related to specific locations.

AKAS - Web Browser

Users of **AKAS** applications can log on via Intranet, Internet or Virtual Private Network.

Once the system verifies their identity and status they have access to all the areas of the application for which they have clearance. They can then browse or modify the information, as they would with any application.

AKAS - Application Server

This module monitors the collection of data from across the Internet and enables authorised staff to analyse or integrate data with 3rd Party applications.

In addition to data management the **AKAS** Internet Server delivers user authentication, audit trail reporting and facilities to manage multiple projects.

System Security

Security is clearly a key requirement where sensitive data is concerned. **AKAS** applications can be protected at numerous levels depending entirely on need.

At the lowest level password protection and controlled user access is provided. All users, whether local or remote, are known to the application. The password authenticates them and confirms details of their access privileges.

Multi layer security features can also be utilised. The **AKAS** applications can be fully encrypted via a SSL Secure Server. All servers can be third party authenticated with digital certificates.

Over the last twelve months Internet Security standards have become the most stringent of any implemented on electronic systems.

4th Wave recommends the use of the three layered security strategy for sensitive **AKAS** applications. We use encrypted transmissions over the Internet, third party authentication of each server system, and digital signatures for each user.

Combined with firewall features and server resilience the above precautions represent a comprehensive package of system security measures.

Systems Integration & Migration

Although **AKAS** represents a new way of developing data driven applications it will also integrate easily with your existing systems. A well designed **AKAS** application does not only replace a multitude of discreet systems but also aids the migration from legacy systems to new technology.

Because **AKAS** uses IT industry standard components it can easily import and export data to other systems, allowing managed migration from one platform to another.

AKAS Technology

AKAS Technology Overview

AKAS integrates the Builder application with Microsoft SQL Server RDBMS and Microsoft Internet Information Server (IIS), both running over a Windows NT platform. The Microsoft SQL Server is secured behind a firewall to provide an initial layer of security for sensitive commercial data. (See diagram below).

Users access the application through a standard Web browser, for example Microsoft Internet Explorer or Netscape Navigator.

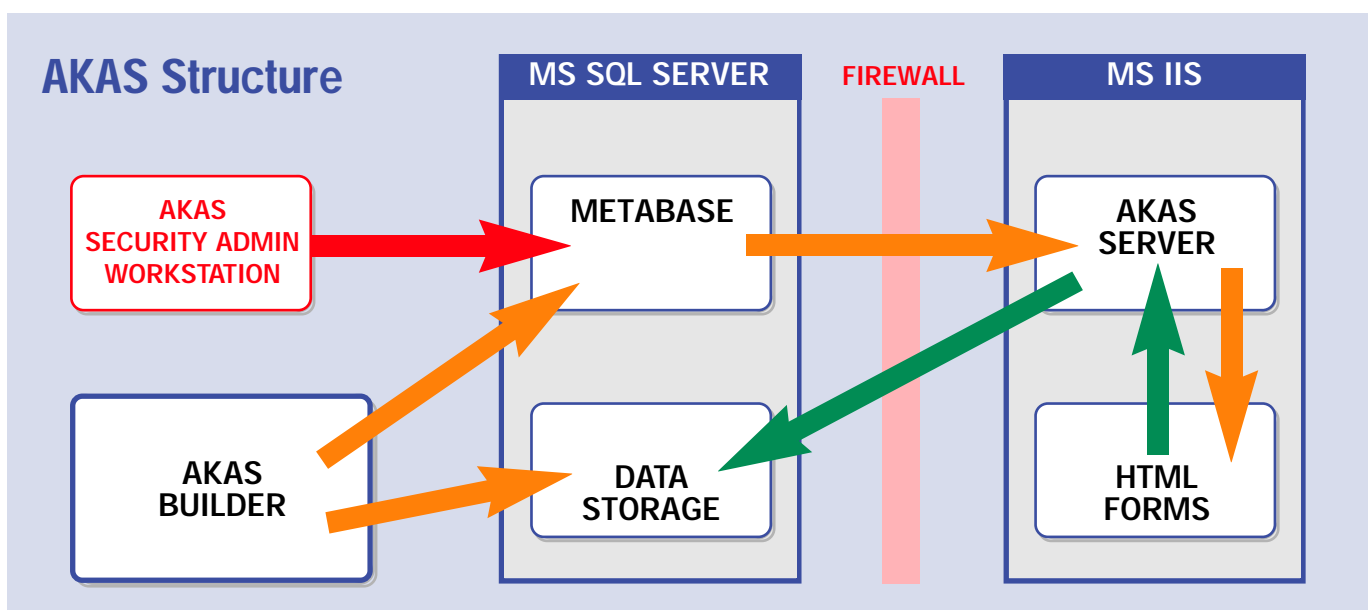
The **AKAS** server can use third party authenticated secure sockets layer (SSL) to verify connection to the correct server. Consequently the server should be registered with a trusted third party authentication service such as Verisign.

The Microsoft SQL Server is also used to store the **AKAS** metabase that contains the description of the customised application details. The metabase is created and maintained by the **AKAS** Builder.

The Microsoft SQL Server also contains the application database and transaction audit trail. Here all the data is collected from remote users, monitored, and amended using the Application Server. The data can be analysed in situ, or exported to a wide range of 3rd Party business systems, for example SAP R/3 or SAS.

System Infrastructure Overview

The **AKAS** system is organised in four parts; Builder, Security Administrator, Web Browser and Application Server.



AKAS Technology

Builders

Builders of **AKAS** applications require a generic Internet enabled Intel PC running Windows NT workstation. This should be connected via a 10 BaseT or 100 BaseT network to an **AKAS** enabled Server hosting the Microsoft SQL Server. The use of a 17" monitor or larger is also recommended with this workstation.

Security Administration

The Security Administrator uses a generic internet enabled Intel PC running Windows NT Workstation. This should also be connected to an **AKAS** enabled server by a fast network.

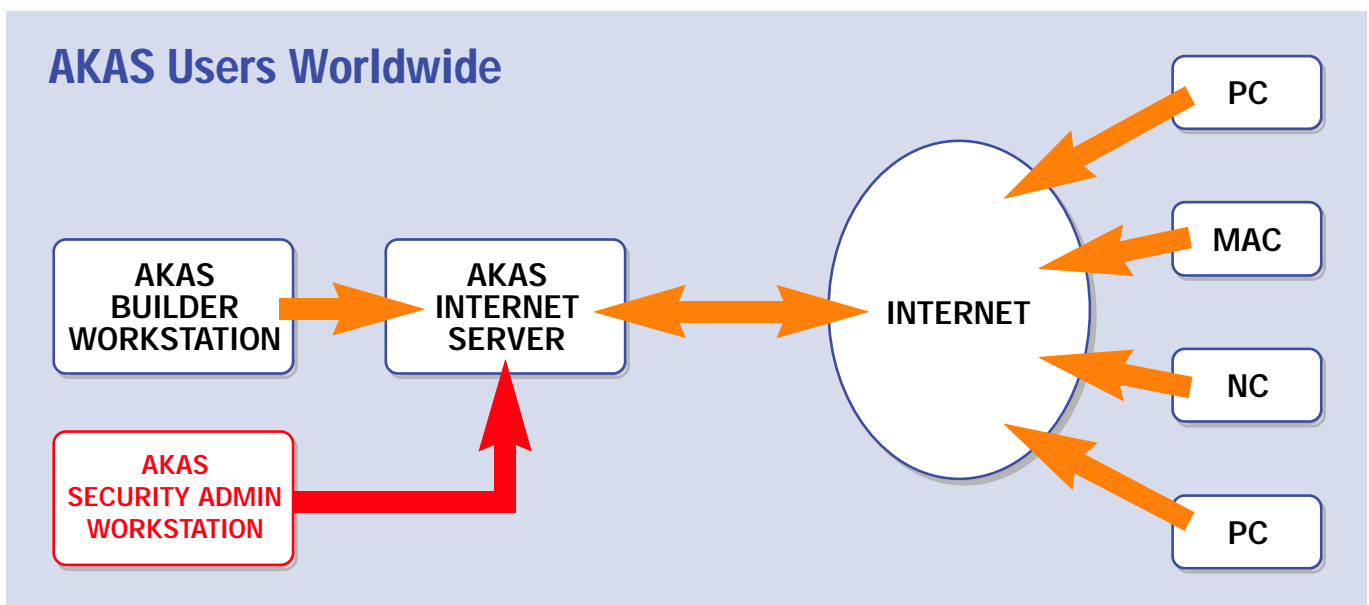
Web Browser

AKAS application users require an Internet enabled Computer running a web browser such as Microsoft Internet Explorer or Netscape Navigator.

Alternatively, 4th Wave can provide QuickNet PB, a low cost personal browser system designed to deliver secure access to dedicated Intranet/Extranet applications.

Application Server

The **AKAS** Application Server requires a dedicated Windows NT server hosting the Microsoft SQL Server and Microsoft Internet Information Server (IIS). The IIS should be configured in secure sockets layer mode. The system must have access to the Internet. The Microsoft SQL Server must also be secured behind a suitable firewall. It is recommended that the server hard disk(s) are configured with RAID to guard against disk failure, data back-up facilities are installed and the system incorporates a UPS. System memory and disk space requirements are dependent on the volume of data and system usage expected.



Implementing AKAS

AKAS Implementation Overview

As Europe's leading developer and supplier of E-commerce solutions 4th Wave has a wealth of experience in the planning and implementation of Internet enabled business projects.

In addition to dedicated technical support 4th Wave also offers **AKAS** developers the following services:

- Complete **AKAS** application outsourcing
- **AKAS** application consultancy
- **AKAS** training
- Infrastructure design and build including Virtual Private Networks
- Project Planning
- Project management
- Ongoing support services
- Internet access and hosting

Further Information

If you would like to learn how **AKAS** could give your business a competitive edge please contact Sam Scoggins or Simon Crowe at 4th Wave.



If you are interested in learning more about AKAS, or the future of ADVANCED KNOWLEDGE ACQUISITION SYSTEMS, please contact Sam Scoggins or Simon Crowe at this address:

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