



# Akiva Disguise Your Data

## Data Theft – Statistics and Privacy Legislations

### Statistics

- **90%** of major corporations detected security breaches
- **70%** of corporations detected unauthorized access by insiders
- An estimated 13.5 percent of U.S. adults – **30.2 million consumers** – were victims of one or more of the frauds covered in the 2005 fraud survey by FTC
- There were an estimated **48.7 million incidents** of these frauds during this one year period as per the FTC survey
- **Myth:** Hackers cause most security breaches
- **Fact:** "Disgruntled employees and other insiders accounted for more than 70% of the cyber attacks"



## Privacy Compliance Legislations

- **Canadian – Personal Information Protection and Electronic Documents Act (2001)**  
All companies doing business in Canada
- **AUS Privacy Act (2000)**  
All companies doing business in AUS
- **Gramm-Leach Bliley (1999)**  
Banks and financial services companies doing business in U.S.
- **Sarbanes Oxley**  
All U.S. public companies and private foreign issuers
- **European Data Privacy Directive (1998)**  
All companies doing business in Europe handling PII
- **UK Data Protection Act (1998)**  
All companies doing business in UK



## Data masking – The need

Data distributed across various phases of software development and testing creates vulnerability through unscrupulous access to vital information. Information in a production environment is normally protected by restricting access to the underlying data. A production system usually has one or more replicated development and test copies. Controls on such environments are much looser in nature.



However the test and development teams need to work with the enterprise system which is structurally correct functional copies of the live environment. For the development and test purposes, as long as the data looks real, the actual record content is usually irrelevant. So, they need not necessarily need to be able to view security sensitive information such as employee's SSN number, genuine credit card / bank account numbers, etc.

## Akiva – The data masking solution

- Akiva is a data masking tool built for PeopleSoft applications
- It masks the sensitive information in non-production database, thereby making it safe for wider visibility. It also masks inbound and outbound files.
- Akiva provides a GUI for the data security officers, to choose any of the sensitive information (Fields) in the enterprise for masking
- This could be either from the vanilla PeopleSoft system or from the customized components of the application
- Data thus masked is not reversible

## Akiva – Features and Benefits

Service Area	Tool's usage description
<ul style="list-style-type: none"> <li>Masks personal and sensitive data</li> </ul>	<ul style="list-style-type: none"> <li>Supports compliance with legislation/policies and Safe Harbor laws</li> </ul>
<ul style="list-style-type: none"> <li>Provides realistic data post-masking</li> </ul>	<ul style="list-style-type: none"> <li>High quality data for testing, development, outsourcing, training and data mining</li> </ul>
<ul style="list-style-type: none"> <li>Masking is application-centric</li> </ul>	<ul style="list-style-type: none"> <li>There is no impact on business processes</li> </ul>
<ul style="list-style-type: none"> <li>Feature-packed with a diverse set of masking algorithms</li> </ul>	<ul style="list-style-type: none"> <li>Any algorithm can be applied to any sensitive data element based on user requirements</li> </ul>
<ul style="list-style-type: none"> <li>Offers a preview of the masked values to the user</li> </ul>	<ul style="list-style-type: none"> <li>Helps the user choose the appropriate masking algorithm</li> </ul>
<ul style="list-style-type: none"> <li>Capable of selectively masking the database</li> </ul>	<ul style="list-style-type: none"> <li>Users can mask selective modules of any application</li> </ul>
<ul style="list-style-type: none"> <li>Facilitates creation of custom masking algorithms</li> </ul>	<ul style="list-style-type: none"> <li>Gives the user the flexibility to define infinite new masking algorithms</li> </ul>
<ul style="list-style-type: none"> <li>Supports multi-threading</li> </ul>	<ul style="list-style-type: none"> <li>Reduced runtime facilitated by parallel execution</li> </ul>
<ul style="list-style-type: none"> <li>Generates compliance report</li> </ul>	<ul style="list-style-type: none"> <li>Provides sensitive fields masked across various environments during SOX audit</li> </ul>
<ul style="list-style-type: none"> <li>Removes critical data completely from the support environment by subsetting the database</li> </ul>	<ul style="list-style-type: none"> <li>Eliminates the exposure of confidential data by data reduction which in turn results in increased performance and reduced infrastructural cost</li> </ul>

## Masking Algorithms

Inbuilt masking algorithms provide the logic for de-identifying data and allow clients to mask data in numerous ways according to different requirements. Following are the algorithms built into Akiva.

- Scramble**  
Arithmetically generates new values in required field format based on user input
- SSN Generator**  
Generate valid US Social Security Numbers for all employees
- Shuffle**  
Mutates and/or riffles data within the database in several ways. Logical realignment of data is done in the database
- Luhn Generator**  
Generate new numbers satisfying Luhn Checksum condition. Typically used for Credit Card Number generation
- Blankout**  
Nullifies the data
- Sequence and Random Number Generators**  
Generate numbers in order or in random
- Replacement**  
Substitutes the field values with a static value provided by the user
- Pattern Generator**  
Generate a set of numbers adhering to patterns. User has the flexibility to define infinite number of patterns
- Lookup**  
Replaces employee names and addresses choosing from an inbuilt repository of over 200,000 names
- Rule based masking**  
Consistently masks the database based on rules/custom masking algorithms defined by the user

**Key Client Engagements**

S No.	Customer	Project Scope	Akiva Product Scope
1	A leading educational technology solutions provider in USA	<ul style="list-style-type: none"> <li>• Upgrade of HRMS from ver 8.3 to 8.9</li> <li>• Implementation of 2 modules in HRMS</li> <li>• Upgrade of CRM from ver 8.8 to 8.9</li> <li>• Upgrade of FSCM from ver 8.4 to 8.9</li> <li>• Support all the above Production instances</li> </ul>	<ul style="list-style-type: none"> <li>• Mask sensitive customer and vendor information to enable offshore testing services on production like data</li> </ul>
2	A global technology leader and supplier to the railroad, transit, marine and mining industries.	<ul style="list-style-type: none"> <li>• To test the implementation of the following PeopleSoft Modules (ver 8.8)                             <ul style="list-style-type: none"> <li>• North American Payroll</li> <li>• Benefits Administration</li> <li>• Pension systems</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Mask employee personal information for Development and Test environments</li> </ul>
3	A large broadband communication company in USA	<ul style="list-style-type: none"> <li>• For application maintenance and PeopleSoft upgrade                             <ul style="list-style-type: none"> <li>• North American Payroll</li> <li>• Benefits Administration</li> <li>• Pension systems</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Mask employee personal and job information for all non production environments</li> </ul>
4	A leading international bank focusing on consumer, corporate and institutional banking	<ul style="list-style-type: none"> <li>• For reimplementation of the following PeopleSoft Modules (ver 8.9)                             <ul style="list-style-type: none"> <li>• HRMS</li> <li>• Payroll Interface</li> <li>• Global Payroll</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Mask employee personal and job information for all non production environments</li> </ul>
5	Ivy league university NY state, US	<ul style="list-style-type: none"> <li>• For application maintenance and training                             <ul style="list-style-type: none"> <li>• HRMS</li> <li>• North American Payroll</li> <li>• Base Benefits</li> <li>• Self Service modules</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Mask employee identifiable information in non-production environments.</li> <li>• Sub set non production environment for increased performance &amp; reduced infrastructural cost</li> </ul>

**About Hexaware**

Hexaware is a leading global provider of IT and BPO services. The company has achieved leadership position in domains such as Banking, Financial Services, Insurance, Transportation, Logistics and HR-IT solutions. Hexaware focuses on delivering business results leveraging technology solutions and specializes in Business Intelligence & Analytics, Enterprise Applications, Independent Testing and Legacy Modernization. Hexaware has been providing business technology solutions for over 18 years and offers world class service delivery, technology leadership and skilled human capital.

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