

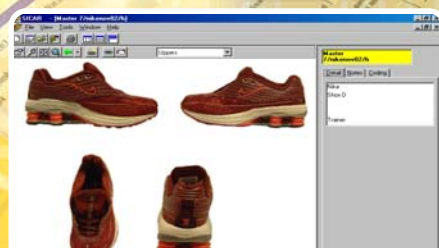
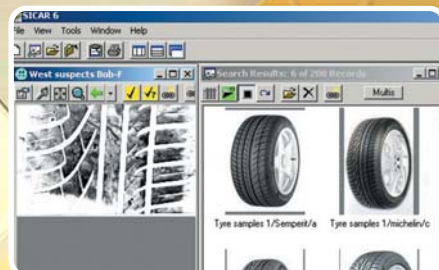
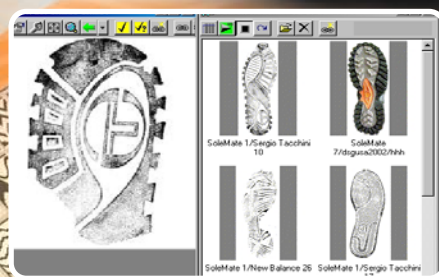
# SICAR<sup>®</sup> 6

foster+freeman

FOR THE MANAGEMENT OF SHOE PRINT  
AND TYRE MARK EVIDENCE RECOVERED  
FROM SCENES-OF-CRIME

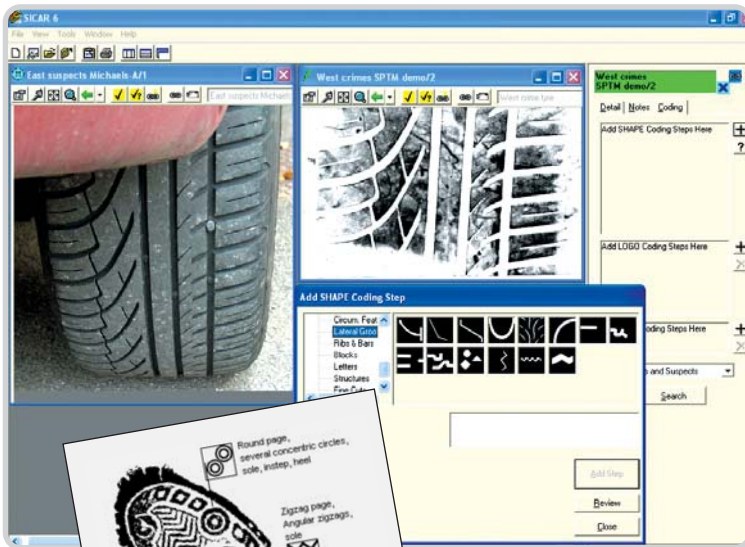


- Archives scene-of-crime shoe print and tyre mark evidence.
- Archives suspect shoe and tyre data.
- Matches suspects' shoes or vehicle tyres to scenes-of-crime evidence.
- Identifies a vehicle tyre or shoe brand using up-to-date reference collections.
- Compatible with crime management systems.
- Multi-user networking facilities.



of forensic evidence

# SICAR®6 the management system for shoe print and tyre mark evidence



SICAR®6, the latest version of Foster & Freeman's evidence management system, has been extended to handle tyre marks as well as shoe prints. Both shoe print and tyre mark evidence can be entered into SICAR®6 and stored with casework data in easy-to-search databases that help you to link crimes with suspects or other crimes via their footwear or vehicles.

## Pattern coding – a simple technique for comparing shoe prints and tyre treads

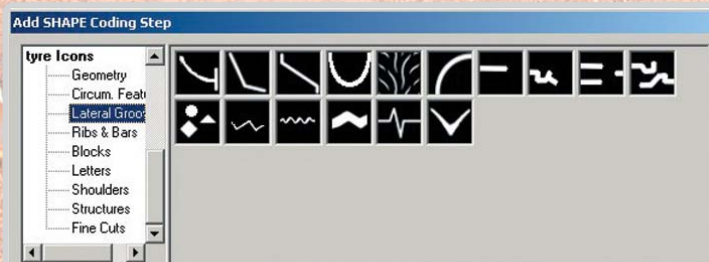
SICAR® provides a simple coding technique for characterising tyre marks and shoe prints to aid search and comparison in database enquiries. This process, taking no longer than a minute or two, allows the operator to create a coded description of the pattern of a shoe sole or tyre tread by identifying elemental features,

such as lines, waves, zigzags, blocks, circles, diamonds, etc. Each feature is assigned a specific code, so that the set of codes becomes a powerful search parameter. And the coding process is a straightforward one of selection, as variants of each type of pattern feature are displayed for the operator to make a simple choice.

## Creating databases of suspects and crimes

Whether you are dealing with a shoe print or tyre mark, SICAR®6 is a total evidence management system in which records are created with as much information on the suspect, vehicle or crime as the operator considers valuable. As well as an image of the sole print or tyre tread and the pattern codes derived from them, dates, names, addresses, type of crime and modus operandi may be added. A 'notepad' section also allows the operator to enter miscellaneous information that may be interrogated via text searches. Images accepted by SICAR®6 may be in colour or monochrome and input from any source including digital cameras and scanners. Image compression is used to improve disk storage capacity.

*The patterns within tyres and shoeprints contain many individual features which, when coded, provide a powerful set of search parameters.*



## Identifying suspects

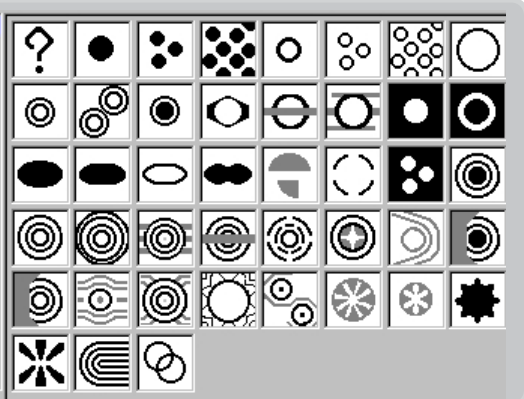
SICAR®6 is designed to match suspects to crimes or crimes to suspects by searching accumulated databases, making use of all available data. Thus, the operator may restrict a search to records of a specific shoe manufacturer, for instance, or to those citing a particular crime scene location, or name, type of crime or modus operandi. A search may also be restricted to events that occurred either before or after a specific date or between two dates. Finally, when a search is complete, the match results are displayed for the operator to make the final assessment.

## Identifying shoes and tyres

When no specific suspect can be identified, the make, model and pictorial images of a shoe or tyre associated with a crime become valuable in the search for a suspect. Two reference databases, SoleMate® for shoes and TreadMate® for tyres, can provide this vital information.

Essential to each database record is a set of codes that represent the pattern of the tyre tread or shoe sole, derived using the same scheme as that provided in SICAR®. They provide the means of identifying the unknown shoe or tyre associated with the crime, in a database enquiry. The databases are extensive, dating back to 1995. Currently, SoleMate® holds 16,579 records and TreadMate® 6000 records.

*Shoe prints and tyre marks are coded by identifying elemental pattern features.*



# SICAR® 6 *is new* with more power and functionality

Many improvements to SICAR®6 are the result of feedback from users' practical experience and include the following features...

## Statistical reports

SICAR®6 provides information on the frequency of occurrence of a shoe sole or tyre tread pattern at crime scenes and is an estimate of the popularity of shoes or tyres using the pattern. An internal auditing programme also allows you to monitor the use and effectiveness of the system by monitoring key statistics.

## Power to link records

SICAR®6 can be used to create links between records, either automatically, as a result of a database search that results in two shoe print or tyre mark records being matched, or manually based on additional intelligence. For example, manual links can be made between the records of a suspect and a known associate or the shoe print records taken from several scenes of crime with a similar modus operandi or different tyre marks found at the crime scene. All links are displayed in a simple 'tree' that allows the operator to follow up the associations quickly.

## Dealing with partial prints

An image compositor has been added to allow several partial scene-of-crime shoe prints or tyre marks to be joined together to form a more complete image, making visual comparison and matching easier.

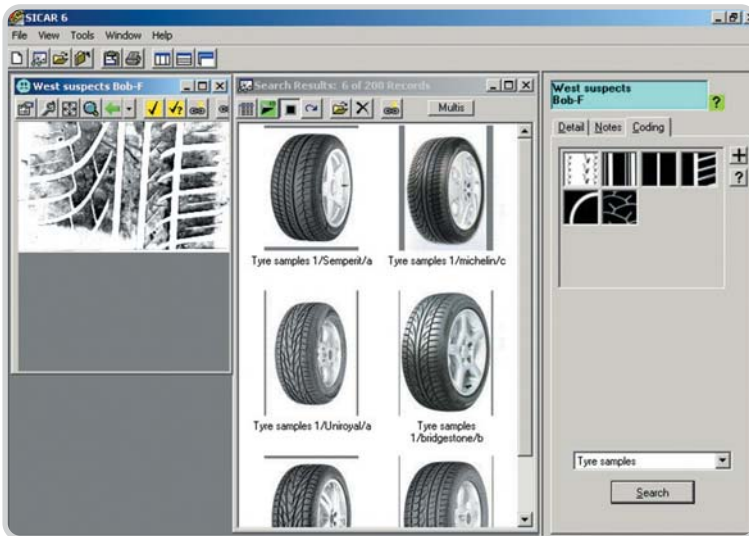
## Compatible with intelligence management systems

SICAR®6 can be interfaced to other selected intelligence management systems with customized software supplied by the company.

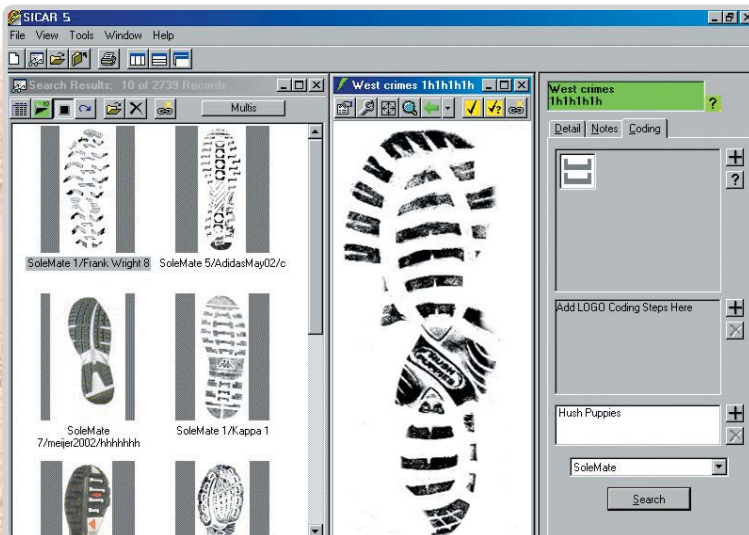
## Networking systems tailored to your needs

To extend the power of SICAR®, workstations may be networked, enabling operatives to search and examine shoe print records held on other databases acquired in other areas, helping to overcome the problem created by regional or police authority boundaries. In a complex network, the activities permitted on each workstation may be restricted to data entry, coding or database interrogation, for example.

Provision has been made for 'roaming licences' to make multi-user systems more flexible and economic. Roaming licenses permit operatives to use the system irrespective of their location.



*Tyre mark and shoe print search results are presented as thumbnail images for further assessment.*



*Specifying part of the search enquiry.*

**Shoeprint Finder**

Crime  Suspect  Reference

Crime Address has Swan Lane, Evesham  Exactly

Scene Number has 114-835  Exactly

Acquisition Date between 01/01/2003 31/05/2003

Categories has Arson

Next Neighbours

# SICAR® 6 the operational benefits

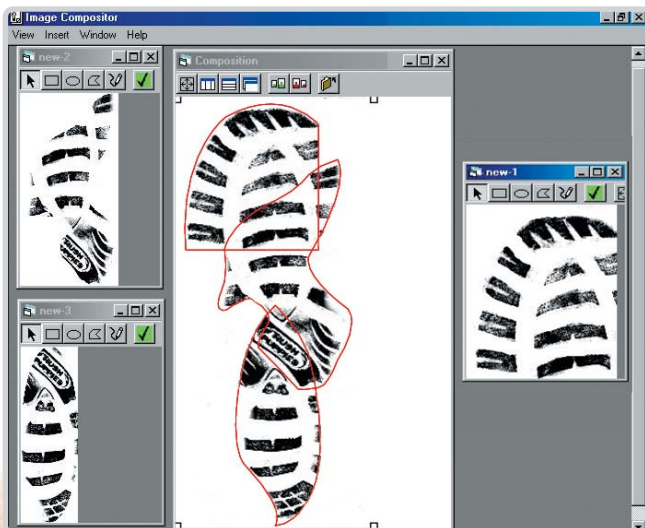
There are options for dealing with footwear or tyre mark evidence – from using an external agency, to undertaking the work in-house. Each has its advantages and disadvantages but, on balance, we believe that SICAR® used in-house gives you more...

## Immediate results

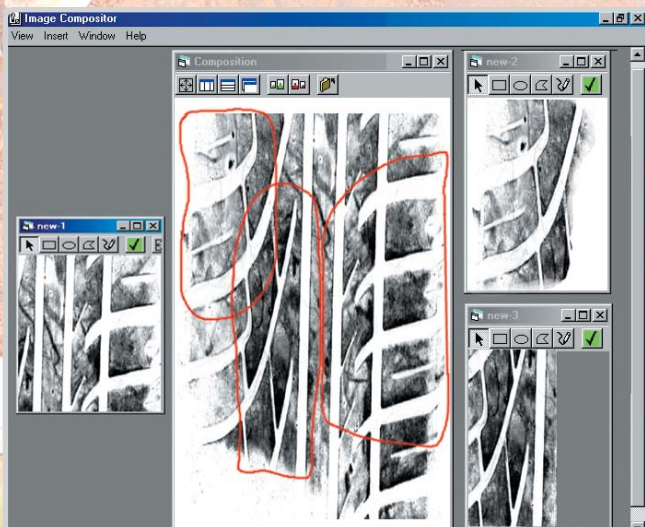
SICAR® allows you to use your shoe print evidence immediately, day or night, with results available in minutes. With a network, information can be made available throughout an entire police authority.

## Simple to use

Over the years, our software engineers have perfected the system by listening to its many users and incorporating their suggestions for improvement. Now, users generally need only two day's training in order to use the system competently on case-work. However, help and advice is always at hand through a telephone support helpline.



*For easier visual comparison partial images can be joined together to form a print impression.*



## Cross-border collaboration

Not only can SICAR® be expanded throughout your own authority with a network that links several workstations, it can access databases held on other SICAR® networks, in other authorities, subject to agreed protocol, providing greater scope for linking cross-border crimes through footwear evidence.

## Product support

SICAR® is supported by a team of application specialists. This allows Foster & Freeman to provide continual product support unaffected by absence, illness or change in personnel.

## Suppliers contact details

In some cases extra information is required from a footwear supplier or manufacturer. However, finding the company responsible for a particular brand and then locating personnel within that company can be a time consuming process. As part of our service Foster & Freeman will provide these contact details to you.

## A system that's always moving forward

Improvements are constantly being made to SICAR® and upgrades are offered from time to time to ensure that users have the best product available. As well as carrying out its own research and development, Foster & Freeman collaborate with university departments undertaking more fundamental research. Currently such projects are aimed at using automatic pattern recognition as the means of comparing the images of shoe prints or tyre treads. These are long term projects which if successful will be incorporated into future editions of SICAR® to make it even easier to use.

# SoleMate® and TreadMate®

## The continually updated shoe and tyre reference collections

SoleMate® and TreadMate® are reference databases providing 16,579 examples of sports, work and casual shoes and over 6000 tyres. Each record is provided with either a photograph or an offset print and where possible both, showing the shoe or tyre pattern. This is also supported by additional photographic images of the subject to assist in visual identification. Obtaining good quality prints of tyre tread patterns is straight forward but to provide the maximum amount of information from a shoe print, Foster & Freeman have developed a novel technique for capturing the instep area of each sole. This can be a valuable part of a print for identification purposes as manufacturer's logos are often molded into this part of the sole. Other vital information includes the manufacturer, shoe model name and season of introduction.

Each database can be used as a stand-alone system or in conjunction with SICAR®6. As a stand-alone system, records may be retrieved using manufacturer and model references or by using ridge pattern codes, providing the means of identifying shoes or tyres found at the crime scene. All sole or tread pattern images in the databases have been pre-coded by experienced coders. Importantly, SoleMate® uses the same footwear reference system as the suppliers so that it is easy to trace further information when required. It also provides links between different brands of shoe or tyre which use the same sole or tread, making it immediately obvious if it is necessary to consider more than one possible brand as being used at a particular crime scene.

The databases are kept up to date by a team of researchers who continually liaise with manufacturers and distributors, collecting data on their latest products.

SoleMate® and TreadMate® are available by subscription and subscribers receive updates, on DVD, with information of new models introduced during the intervening period.

An archive collection with footwear dating back to 1995 is also available.

## After sales support

Foster & Freeman are always pleased to provide advice, installation, training and on-site maintenance world wide. *(Please contact one of our offices for further information).*



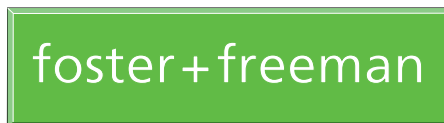
*A team of researchers have direct contact with footwear and tyre manufacturers and their distributors to update the SoleMate® and TreadMate® collections.*

*Foster & Freeman's offset printing technique captures any features moulded into a shoe's instep, valuable information often lost by other processes.*



*Different brands of shoe or tyre that share the same sole pattern are contained within the reference database.*

Appointed Agent:



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