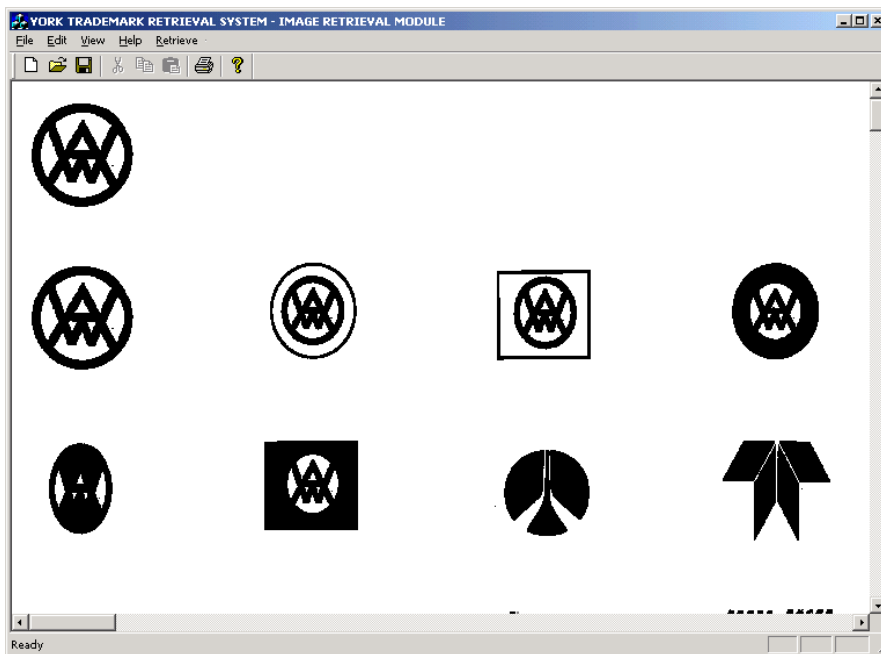


The AURA Trade Mark Image Database System AURA-tm

AURA-tm is the only system available that can search on the shape of a geometric trade mark image. Up to now search has been only possible on key word descriptions, resulting in large numbers of potential matches being returned. It has been developed over the last 5 years, building on the **AURA** pattern matching technology. The system is currently under final development to scale a working prototype to large numbers of images.



The Cybula AURA-tm is designed to return geometric trade marks that are considered most similar to the ones stored in a database of trade marks.

Scalable application, suiting small trade mark databases (a few thousand) to very large databases (over 100 thousand).

Selects images based on the subjective features.

Presents a ranking of images that can be tuned for specific needs.
Uses structural image elements to perform a match.



The Cybula solution is more than just another image database, it has been designed specifically to fulfil the needs of the trade mark problem, in particular by taking account of the subjective nature of the matching problem. The system operates in three stages. The first stage selects and groups image features, then it submits these to an **AURA** based search engine, finally the results are sorted and scored.

The first stage operates by selecting many simple and complex image features; these are selected based on how humans may 'see' features in the image. The system exploits 'gestalt' grouping principles to decide how features should be combined and used in recognition. The result is a graph-based representation of the image that is then passed to the match engine.

The match engine is designed to match graph based representations. The system uses a combination of **AURA** CMM systems and a novel constraint propagation system.

The result is a highly selective match system that can scale to very large databases, and still operate on cost effective computing systems.

The final stage extracts the matched marks from the database and ranks them for presentation to the user.

The software

The Cybula trade mark system exists as a C++ library that can be imported into any current application. A demonstration system with a simple MS front end for input and browsing of results is available for evaluation.

For further details contact enquiries@cybula.co.uk. US offices opening shortly.

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