

xcavator

For Consumer Photo Search and Management

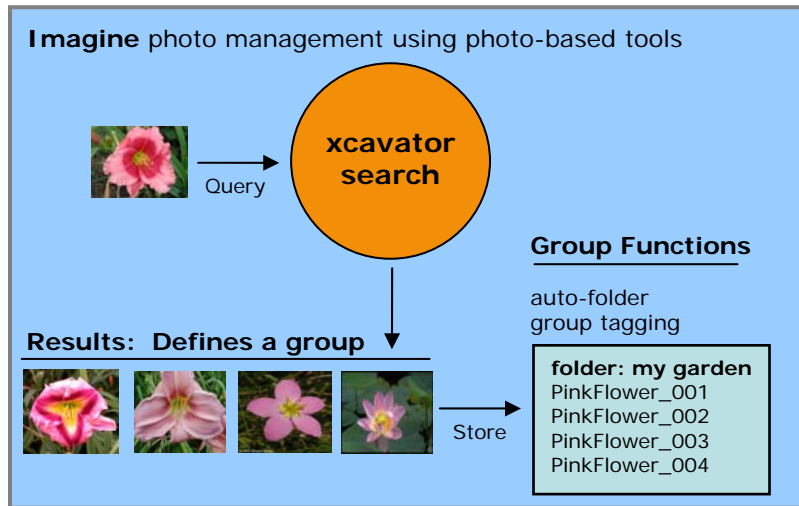
PRODUCT DATA SHEET

The CogniSign **xcavator**™ product solution has been designed for consumers who need help searching through and managing their digital photos, when using their home PCs or web-based photo management services. It provides tools for easy real-time photo search and automatic and semi-automatic photo naming and cataloging. The key to **xcavator's** capabilities is its underlying image recognition technology, which allows photo searching visually based on photo content rather than relying on text-based approaches. This enables a new User Interface paradigm for photo search and management:

Search: The Key Ingredient

Easy as 1-2-3

1. Pick an image to start
2. Define the elements of the image that are important to you
3. Use group functions to catalog the search results (a collection of similar photos)



A search capability based on photo content – not keywords or tags - allows a user to quickly find photos that are visually similar in a way that is important to the user. In addition to powerful new search capabilities, the **xcavator** platform solution has several other key features that are having a major impact on the two largest consumer photo search and content management market segments:

Key Product Features and Benefits

xcavator

Natural and targeted real time search
Assisted naming and categorization of photos
Easy use of low-resolution proxy images
Distributed photo storage and search

Market Needs

PC-based home media computer	Web-based photo management services
YES	YES
YES	YES
YES	YES
NO	YES

Consumers are becoming more and more challenged every day by the task of managing their household collections of digital photos, which today include thousands of images. With film and development costs no longer a limiting factor in photography, household photo libraries will grow at a rapid rate for many years. Search can take on a much more important role in the consumer's ability to manage these libraries, if a user can find photos based on their inherent visual content and then manage these assets as a group.

The interactive search features of **xcavator** provide this type of solution and represent the next generation of photo management:

The Evolution of Photo Management

<p><u>1st Generation</u></p> <p>PC Filename and Folder System</p>	<p><u>Features</u></p> <ul style="list-style-type: none"> • File description is text naming and time stamp • Placement in folders is individual drag 'n drop 	<p><u>Limitations</u></p> <ul style="list-style-type: none"> • Search only text based • Extremely manual • Tools manage only one photo at a time
<p><u>2nd Generation</u></p> <p>Visual Photo Collection Systems</p>	<p><u>Features</u></p> <ul style="list-style-type: none"> • Photos are viewed grouped on 'light boards' • Photos can be manually moved between groups 	<p><u>Limitations</u></p> <ul style="list-style-type: none"> • Search only by collection • Photo naming manual • Tools manage only one collection at a time
<p><u>Next Generation</u></p> <p>xcavator</p>	<p><u>Features</u></p> <ul style="list-style-type: none"> • Interactive search based on photo content • Group management based on photo content 	<p><u>Benefits</u></p> <ul style="list-style-type: none"> • Powerful visual search • Name groups of photos • Tools manage dispersed photo databases

New Product Solutions from New Technology

xcavator provides powerful search capabilities by using an innovative computing model that emulates the process of human cognition – the way visual memory and serial attention cooperate in the human brain.

This model is the result of nearly a decade of research, and has two key advantages:



Superior image recognition - the computing model provides human-like recognition performance when searching for similar photos. As when humans view photos, it is sensitive to some discrepancies in color, shape, and viewing perspective, and is highly tolerant to variation in position and scale.

Interactive user interface – users can quickly pick key color or shape features in any photo to drive a search for similar photos. The Stored Search capability allows these photos and their feature selections to be saved so that new photos added to the user's collection can be automatically scanned for similarity. This enables assisted naming and categorization of photos.