



DERMALOG Company Profile

Head Office - Identification Systems DERMALOG GmbH

DERMALOG is a leading research and software development company that specializes on biometrics identification technologies, especially in the fields of fingerprints and palm prints. Its head office is located in Hamburg, Germany. DERMALOG's software technologies are structured modularly and are strictly developed in-house using the latest state-of-the-art development tools, adhering to worldwide industry standards to run on standard open system architecture hardware platform for easy customization, integration and portation.

DERMALOG's software products are extremely versatile and flexible. Diverse scaleable systems configurations from entry level virtual standalones to clusters/network of personal computers running WINDOWS Versions of NT, 2000 and XP to enterprise-wide Unix platform solutions are available depending on customers requirements. Excellent investment with a flexible migration path with future growth built-in and therefore not dependant on any proprietary environments.

Malaysian Subsidiary - DERMALOG Afis Asia Sdn.Bhd.

DERMALOG Afis Asia Sdn.Bhd. in Kuala Lumpur is a wholly owned subsidiary of DERMALOG Identification Systems GmbH (DERMALOG) in Hamburg, Germany. The company was incorporated and established in 1993. Since inception, its business charter has been to develop and co-ordinate the marketing activities of the Asia Pacific region. To-date, the Asian subsidiary has been highly successful with growing business volume in Japan, Malaysia and Indonesia. With this local office expansion, Asian customers have the added advantage of efficient customer support from an international AFIS vendor. A DERMALOG's research and development center is currently being planned for Malaysia.



Figure 1: DERMALOG corporate office in Hamburg, Germany



Foundation / Historical Background

The DERMALOG fingerprint and palmprint software products resulting from research and development projects based on fingerprint and palmprint recognition technologies at Hamburg University, Germany. The projects were initiated and successfully run by Mr. Günther Mull, a German human biologist scientist. Individuals fingerprints and palm prints were examined and analyzed nation-wide in statistical studies since 1979. With each successive finding, the results were further analyzed to provide the initial 'BLUEPRINTS' of DERMALOG's future fingerprint software. During the course of the research projects, a team of a German police police officers visited the research laboratories and were highly impressed by the innovative technologies and the advances made in computerized fingerprints biometrics software.

In 1984, Mr. Mull founded the DERMALOG group of companies. DERMALOG was immediately commissioned by the German police to develop a fingerprint live scanner system



Figure 2: Founder and CEO of DERMALOG Günther Mull

for their usage. A fingerprint live scanner system has been successfully developed and is currently marketed worldwide.

DERMALOG's research and development programs were further funded by grants from the German ministry of research and technology in 1986. The company was chosen out of thousands of other German technology research projects applying for research funding. With such strong a support from the German government, DERMALOG was able to establish its own research and development facilities. The first application software product to roll out of the researches was the DERMALOG medical screening program, which is used for prenatal testing of pregnant women on the livelihood of having a Down syndrome child. The medical screening program has been very successful and the number of installations amounts to well over five hundred internationally.



Concurrently, DERMALOG's Automatic Fingerprint Identification System (AFIS) software architecture was designed. Continuous in-depth researches are being carried out to search for the optimum combination of a fingerprints' biometric characteristics that will give rise to a formula for a most accurate and effective fingerprint matching algorithm for future system implementation. Assessments and benchmarks on quality, reliability and accuracy are constantly carried out, reviewed, and updated to further improve system performance.

By 1990, DERMALOG has started marketing the DERMALOG AFIS software and has installed successfully the same year an AFIS system for the Royal Guard in Saudi Arabia. DERMALOG also won acclaims for its fingerprint technologies by winning the Hamburg Technology prize in 1990.

Thus, by 1990 DERMALOG has successfully developed its software, launched, installed and implemented its software and live scanners worldwide.

Structure / Organization

The DERMALOG group of companies is public registered firms based in Hamburg, Germany; having their own in-house research and development facilities, OEM and marketing departments. With its rapid expansion, a subsidiary was established in Kuala Lumpur, Malaysia, in 1993. DERMALOG AFIS Asia coordinates the sales and marketing activities in the Asia Pacific region. This subsidiary lends special support to existing installations in Japan, Malaysia and Indonesia.

As most installations have been successfully sold through business partners worldwide, DERMALOG has developed a comprehensive training program for both the system users as well as business partners. As DERMALOG has its own research facilities, it thus has the capability of providing better support and maintenance facilities as any system trouble shootings can be carried out immediately with the necessary equipment and experienced engineers working together with the relevant software developers responsible for that particular software module. This ensures that any would be problems will be efficiently resolved and worked upon immediately.

DERMALOG forms a project management team specifically for each and every project to ensure the success of any its installations. All the customers' needs are closely monitored and catered for.





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Technical Products Developed In-House

(With world-wide Copyrights and Patents) Marketed Internationally:

DERMALOG Medical Screening Program

Through extensive evaluation of palm prints from Down Syndrome children and their parents as well as those from normal born children and adults, DERMALOG was able to devise a software application program to detect the percentage of risks of having a Down Syndrome child in pregnant women. This software is currently marketed through pharmaceutical companies, gynecologists and medical doctors. Since the launch of the product, there have already been more than five hundred installations worldwide. The software has been very successful and at the same time contributes highly to the medical field.



Figure 3: DERMALOG's early innovative Start and Biological Background: Newsweek Article about the DERMALOG products and it's cutting edge technology from 1989



DERMALOG Live Scanner

The original live scanner system developed by DERMALOG for a German police department has since undergone many new improved functionality/variants and structures. In line with the market needs, DERMALOG has also developed a palmprint livescanner system. The National Police of Japan is currently using the DERMALOG palmprint and fingerprint livescanner system integrated with their AFIS system. DERMALOG working together with Mitsui Corporation of Japan were chosen as the vendor of choice in an international tender of the Japan Police; being superior in product technicalities and price.

The DERMALOG live scanner systems for fingerprints and palm prints enables inkless capturing of fingerprints/palmprints that are translated into digitized images by the internal highly sophisticated opto-electronic sub-assembly that enables them to reproduce images of the highest quality. These digitized images can be downloaded into the computer for storage or further processing or can be printed out as hard copy and even can be transmitted to different remote receiving stations within the network. The digitized images are produced accurately at high speed with all the necessary biometric characteristics intact.



Figure 4: [Gunther Mull, CEO and CTO of DERMALOG:](#)
[Early Revolutionary Genetic Research on Fingerprints and Palmprints](#)
 Article in Electronic Engineering Times from 1990

As there are very little moving parts in the construction of the LiveScanner system, maintenance are relatively low and make it extremely durable and reliable. With the portable version, most raw materials used are tougher to withstand heavy-duty usage and mobility. As the user needs only place the required finger or palm on top of the glass plate of the scanner for immediate capture of the image, the device is extremely user friendly and need no complicated training for usage. No wastage of time and materials is necessary as the quality



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of prints is always and needs little repetitions. Thus the use of livescanner not only produces excellent results but also ensures the highest accuracy in hit rates and reduced materials costs.

DERMALOG AFIS Software

The DERMALOG AFIS software is developed to replace the manual system of identification of fingerprints. The software system ensures highest accuracy in hit rates and is also highly automated to be extremely user friendly to ensure ease of use. It is an entirely software based solution and runs on standard open system hardware platform. As such, investment costs in an entry level system is low and due to its inherent scalability; the system can easily be expanded further as needs arise. DERMALOG's AFIS configuration is both modular and flexible.

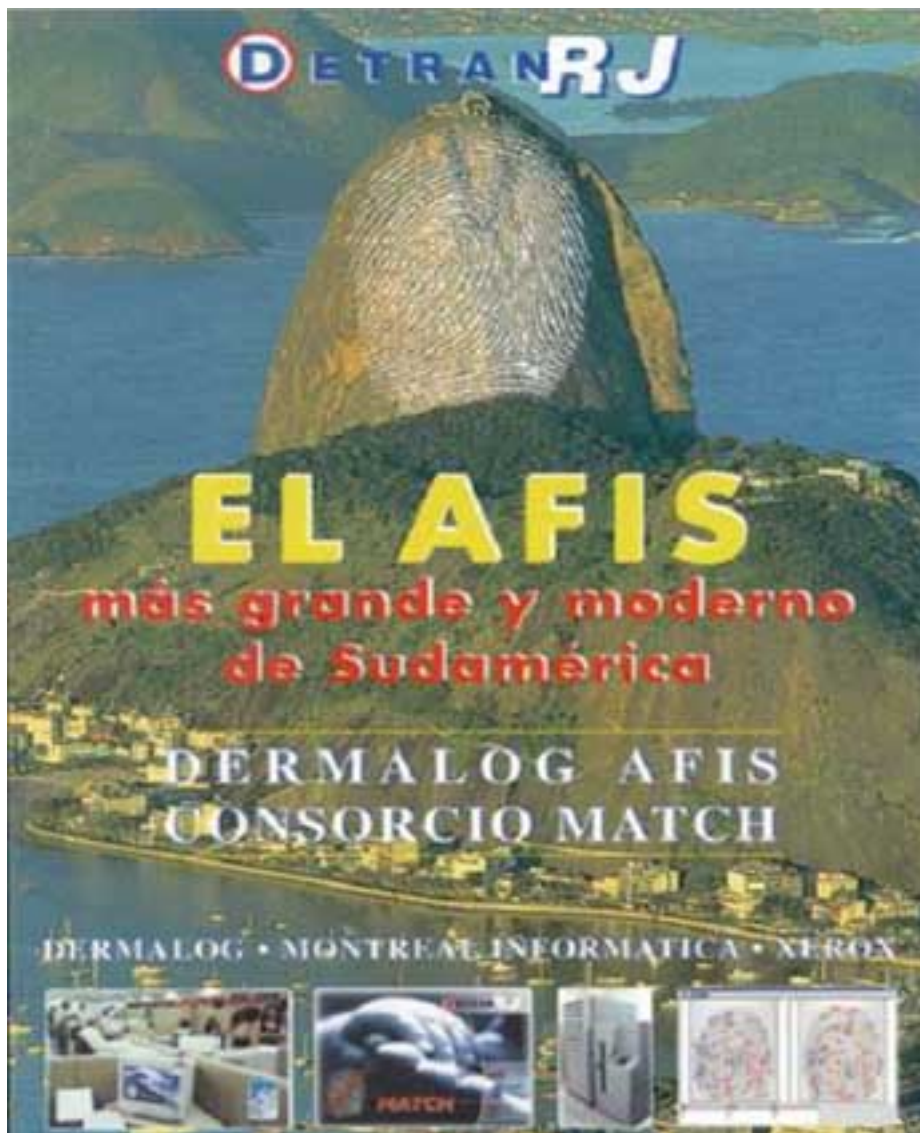


Figure 5 LARGEST AFIS
in South America in Rio De Janeiro

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A high degree of customization is possible as the entire product line is developed in-house. For example, delivering in the language of the purchasing country e.g. Kanji for Japan, Arabic or Cyrillic, etc. Many other functions are embedded like special scanning features, etc. The system also has mugshots integrated and can also be linked to a criminal information system.



Figure 6: The Brunei National Biometric Smart ID Card with [DERMALOG AFIS](#) and National Registration System. The Complete System was developed, delivered and installed by DERMALOG in 1999 and 2000.

DERMALOG software uses 256 true gray levels, capability of minutiae markings of up to 200, different combination of pattern types, core and delta calculations, ridge counts in its algorithm; this essentially gives rise to extremely high accuracy and high hit rates in the ten prints and latent prints searches. The system has its own built-in quality control for acceptance and replacement of the required image qualities to ensure the necessary biometric

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characteristics are present. As the verification depends highly on a fingerprints' characteristics extracted from fingerprints input into the system and as the operator handling the capture of fingerprints are usually are novices, this innovative 'internal pre-qualification' of fingerprint images is highly important. This naturally translates to a more effective, working system. Customers can always be sure of reliable results in crucial verifications.

The software maintenance is fully carried out by DERMALOG's team of engineers and researchers, thus ensuring quality in support and effective communications between DERMALOG and its customers. Feedback reports are kept on all sites to ensure effective planning and support strategies for the future.

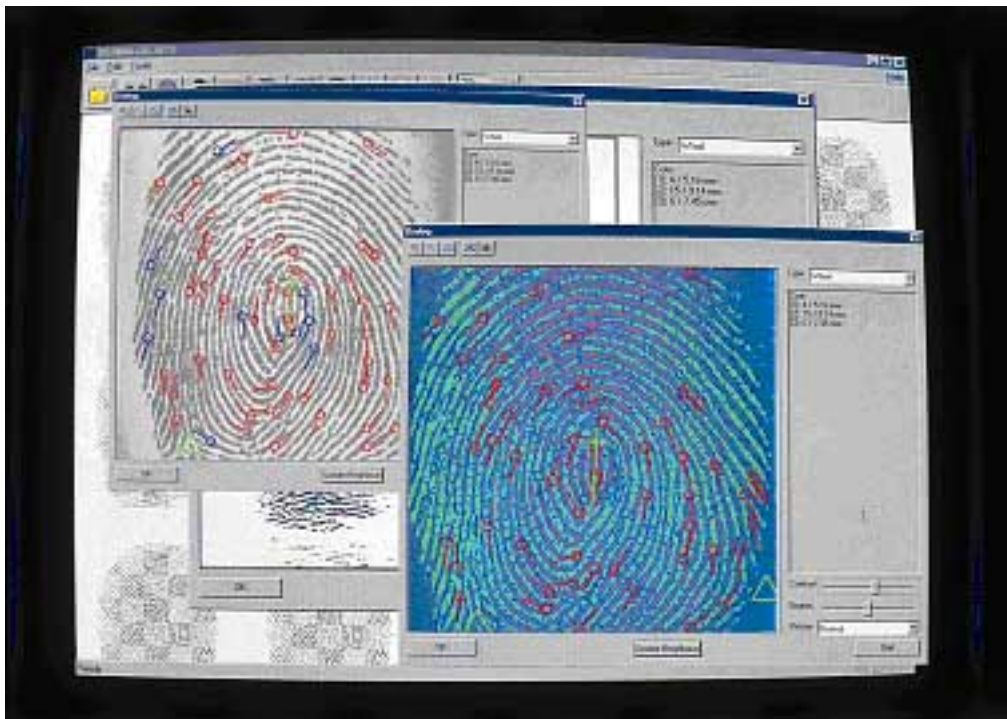


Figure 7: Dermalog AFIS Screens

DERMALOG Fingerprint / Palm Print Access Control

Many customers see this as still a relatively new technology. The DERMALOG Access Control software is designed as the most accurate, technical advanced and easily expandable solution. As it is developed from a proven biometric technological background of fingerprint and palmprint products, the product is extremely accurate, easy to use, simple to set up, highly integratable, ensures flexible customization and at the same time cost effective.



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IDENTIFICATION SYSTEMS
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Biometric Finger Identification

DERMALOG FINGER LOGON

Forget your passwords
use your **FINGER**

DERMALOG FINGER LOGON for

- Secure Windows Logon
- Secure Internet
- Secure E-commerce
- Secure Banking
- Secure Databases
- Secure Networks

IDENTIFICATION SYSTEMS
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Biometric Finger Identification

DERMALOG FINGER KEY

Your finger
is your key

Access Control easy & safe

- No mechanical key
- No PIN, no card

For use in

- Banks
- Offices
- Server rooms
- Laboratories
- Production areas

DERMALOG Identification Systems is ISO 9000 certified, based on the latest ISO Standard: DIN EN ISO 9001 : 2000.

Thus it has very low investment costs, needs little maintenance, and can be integrated to other products. Current demands come from motor industries, airports, intelligence buildings, high

security areas, identity cards, passports, etc. So with more and more introductions of new product applications, the DERMALOG system is designed to cater for differing needs.





Business Policy / Future Strategies

As the company is built from a technological background, DERMALOG will continue to invest to its research and development facilities to make ensure that all future products are always of leading-edge technologies and will remain in the forefront of the biometric field.

The company will focus its resources and strengths in providing solid support to all business and OEM partners to ensure successful installations as well as continuity in effective communication both internally and externally. DERMALOG will continue to integrate the companies' system, software, and services into solutions distinguished by their openness to the users' business and operating environments i.e. solutions with the flexibility and power necessary for the user to access and manage environments that are particularly complex, diverse, and fast changing.

As for product designs for the future, DERMALOG will structure its products around the following:

Design advantages - modular, comprises of various compatible units. There is no standard DERMALOG installation; every system is built to cater exclusively for specific requirements and preferences, from small-scale standalone up to large-scale systems. DERMALOG can incorporate any existing or new hardware and/or software, and can offer data exchange with different systems.

Open architecture - an open architecture design allows individual components to be easily updated, expanded, or replaced by standard components when necessary. The system is always updated to the latest state-of-the-art in technology as new advances and improvements can be immediately incorporated.

Adaptability - easy adoption to specific requirements as customization capabilities are already built-in adhering to industry standards.

As for customers, DERMALOG values them as their most important asset. Every successful installation becomes the 'life-blood' of the company. DERMALOG will always work as a team with business and OEM partners as well as users to achieve the BEST in innovative product designs and advancements. DERMALOG is thus committed to the highest possible degree of reliability, dependability and support at every stage of customers' installation, training, maintenance, and customer services.

