

# ZOTECA™

PUTTING RAPS™ INTO THE NETWORK:  
RELIABILITY, ACCESSIBILITY, PRIVACY, SECURITY

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## Zoteca Company and Product Description

*Zoteca and RAPS are service marks of Zoteca, Inc.*

ZOTECA™



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## ***What does Zoteca do?***

Zoteca creates software toolkits for the rapid development of efficient, safe, robust and scalable applications used in distributed, networked environments. Zoteca's base product is an infrastructure framework for rapidly developing network-based applications. Using this framework, extended by patent-pending technology, Zoteca creates product platforms which provide reliable, available, private and secure ("RAPS") data sharing. Our customers use these platforms to build customized data sharing applications, which provide RAPS services to end-users — both businesses and consumers.

## ***Why care about RAPS?***

The past few years have fundamentally changed the way business is conducted. Information technology is no longer a walled-off island within the confines of the corporation. All IT application development must contend with the complex issues of distributed communication in a networked environment. Software application development is now far more complex and far more costly than in the past. The promised savings in operational efficiencies have not yet been realized. Estimates for the amount wasted annually in just the U.S. health-care industry as a result of data interchange inefficiencies range as high as \$250 billion. Across all industries, the amount is staggering, rivalling the GNP of most countries. Moreover, networked environments exponentially increase the problem of data safety — security and privacy. Inefficiency and unsafe data are a direct result of information networks being notoriously un-RAPS. The pressure to address these problems is causing IT spending to sky rocket, making Y2K spending seem like child's play. Tools that reduce development complexity and increase RAPS are critical for the future of IT.

## ***What is original about Zoteca?***

### **The Zoteca Metaphor**

We use a zoteca, which means "private room" in Latin, as a metaphor for data entities and their associated computing processes:

- reliable means zotecas never get lost or destroyed, and are automatically recoverable;
- available guarantees that zotecas can be locally accessed anywhere in the world their owners happen to be, and are not tied to a specific physical device or location;
- private assures that only the zotecas' owners know about their existence and only their owners can let others enter them;
- secure confirms that a zoteca can't be broken into or stolen, and it is impossible to access any data which is not in the zoteca.

### **RAPS**

Zoteca's technology transforms this metaphor into a concrete reality. In current networks it is nearly impossible to achieve reliability and accessibility simultaneously — hence the constant shuffling of data between centralized servers and the organizational edge. Similarly the more private and secure

networks are, the less efficient data sharing becomes. Zoteca creates spaces where individuals and groups share data in a total RAPS environment, simultaneously efficient (R & A) and safe (P & S).

The core of our innovation involves decoupling computing entities (data, files, etc.) from specific physical computers or locations, thereby eliminating single point of failure. By using distributed protocols, redundant and immutable data stores, sophisticated authentication schemes and encryption techniques, we address the problem at the infrastructure level, allowing us to offer guaranteed levels of service in terms of the four RAPS dimensions.

### **User and Organization Friendly**

Unlike other products, ours easily integrate with the way people and organizations work. To use our RAPS technology, one need only save data within existing applications, just like one normally does. Zoteca guarantees that data is backed up and that it migrates to the people authorized to share it. No push and no pull actions are necessary. Zoteca preserves the server-centric model of organizations while allowing peer collaboration. Zoteca operates at the *data* level — providing far more than just another *file* sharing technique. Zoteca's two-level authentication protocols leverage existing authentication infrastructures. Zoteca can integrate and work with most encryption technologies.

As a result, Zoteca provides customers with computing services that are *radically more RAPS* from those currently available, while *allowing people to work the way they always have*. The limitations and difficulties associated with using computers and their operating software, disappear.

In addition, Zoteca offers our customers a toolkit platform which abstracts out the complexity of application development for distributed information networks. Not only are resulting applications more RAPS, they are also simpler and less costly to develop.

### ***What are Zoteca's current product-platform offerings?***

Zoteca does not build off-the-shelf product solutions. The needs of large organizations are too diverse, their investment in existing IT infrastructure too great, for any shrink-wrap solution to be appropriate. Rather, working together with world-class IT system integrators, service providers and complementary technology partners, Zoteca offers software platforms and tools for developing applications that provide an integrated RAPS infrastructure to the existing organizational IT environment. Our product platforms support standard servers and workstations, as well as next generation hardware such as Internet appliances and wireless PDAs. We support both Unix and Windows environments.

Our most fundamental toolkit is the **Zoteca Back End (ZBE)**. ZBE is a framework for writing asynchronous, multi-protocol, event-driven applications for distributed network environments. The ZBE allows for rapid application development by creating an abstraction layer for low-level networking operations and protocols. The ZBE also provides a highly efficient and flexible, two-way remote object protocol. Using the ZBE and our patent-pending data-sharing technology, Zoteca is also creating a series of RAPS toolkits. Our first generation offerings:

**Zoteca RecordFlow** — RAPS data transport, for the efficient and secure flow of data records within co-operating systems of multiple, heterogenous organizations and their sub-units.

**Zoteca Share** — RAPS file sharing for individuals and/or organizations

Other products platforms which are under development:

**Zoteca Document** — RAPS enterprise document management for efficient and secure document management across and within organizational boundaries.

**Zoteca Messenger** — RAPS asynchronous messaging (email and IM)

**Zoteca Group** — RAPS groupware

### ***What are the advantages of Zoteca technology?***

Zoteca's technology uniquely addresses the inefficiency and safety issues that drives IT spending, and provides a core infrastructure solution. By offering reliability and accessibility, Zoteca significantly increases efficiency while ensuring the highest level of privacy and security. Zoteca's distributed technology ensures scalability in large enterprises. Our sophisticated toolsets reduce development costs.

Specifically, Zoteca-based products:

- ensure that data flows only to those who should access it;
- provide an audit log of all data;
- ensure that no data can be lost or falsified;
- provide for automated data disaster recovery, even at the peripheries of the network;
- guarantee secure operation across and inside organizational boundaries, while keeping firewalls closed and intact;
- integrate with existing IT infrastructure and organizational practices;
- provide a scalable, high-performance solution.

### ***Who is Zoteca's competition?***

Our competition is the current work practices of individuals and companies e.g., file sharing through email, ftp or VPN; online secure data storage or virtual LAN services; peer-to-peer products; and middle-ware software platforms. All of these address RAPS issues at the application level, if at all. As a result, they suffer from the inherent drawbacks of a single point of failure; at best, they address only one or two of the four RAPS dimensions. Moreover, they often require people to change the way they work and don't fit in well with organizational requirements and behavior. All of them are complex to use and costly to develop applications with.

Our infrastructure approach offers our customers huge cost-savings, by reducing development complexity, eliminating the inefficiencies currently associated with data sharing while smoothly integrating with standard organizational practices. RAPS benefits can be added in a modular fashion, without having to totally replace existing infrastructure or radically change organizational work patterns. In addition, we provide a low-cost and easy-to-use solution for meeting regulatory demands. Moreover, unlike most of our competition, we address both legacy networks as well as the coming generation of un-tethered ("wireless"), pervasive ("connect everywhere"), persistent ("24x7 connection") information networks ("UPPI-nets"). RAPS issues, with their associated costs, become geometrically more acute in UPPI-nets. Zoteca is uniquely positioned to provide a comprehensive solution to future problems, while not neglecting the current ones.

## Founders

**Aron Trauring** — CEO. Aron has worked nearly 25 years in technical development and management and international sales and marketing for high-tech companies in the US and abroad, including a stint as Director of European Sales at AMDOCS. Seven years ago he co-founded an interactive agency, MAXIMA Multimedia (<http://www.maximam.com>). He also co-founded an Internet B2B ASP two years ago.

**Itamar Shtull-Trauring** — Chief Technology Architect. Itamar has worked professionally in software technology development for nearly seven years. He studied computer science and mathematics at Tel Aviv University and is the author of several patents. He most recently served as the chief programmer at an Internet startup.

## Board of Advisors

**Dr. Mahadev Satyanarayanan** Professor Satyanarayanan is the Carnegie Group Professor of Computer Science at Carnegie Mellon University. An experimental computer scientist, he has pioneered research in the field of mobile information access. An outcome of this work is the Coda File System, which provides application-transparent support for disconnected and weakly-connected operation. Key ideas from Coda have been incorporated by Microsoft into a forthcoming release of the Windows NT file system. More recently, Satyanarayanan and his research group have been working on application-aware adaptation, a more general approach to mobile information access. This concept is being explored in the context of a new platform, Odyssey.

**Dr. David Chaum** — Founder and a member of the Board of Directors of DigiCash Inc., a company that has pioneered electronic cash innovations. In the area of cryptography, Dr. Chaum has published over 45 original technical articles, received over 17 US patents, and founded the scientific organization, the International Association for Cryptographic Research (IACR). Concurrently he created and chaired the Smart Card 2000 conferences and several European Union funded industry consortia, including CAFE, which focused on electronic-wallets and the smart cards they hold. He built up a cryptography research group at the Center for Mathematics and Computer Science (CWI) in Amsterdam and during this time also founded DigiCash.

**Dr. Mel Horwitsch** — Professor of the Management and Chair of the Department of Management at Polytechnic University and founding Director of the Institute for Technology and Enterprise. He is also Visiting Professor at London Business School. Previously he was Professor and Founding Dean of Management at Theseus Institute in Sophia Antipolis, France, serving on the Theseus Board of Directors and Theseus Scientific Advisory Board. He has written extensively on innovation and technology strategy, particularly with reference to such knowledge-intensive sectors as services, information technology, and telecommunications.

## **Contact Information**

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