AlephVision is a business intelligence tool that presents a real-time view of information computed from data gathered from multiple systems. AlephVision engine codifies existing information flows, turning them into an always up-to-date management cockpit that provides real-time decision support information.

Designed for medium and large enterprises, AlephVision merges data from multiple sources, accelerates the flow of data within the company, extracts actionable information, and provides an independent reporting path.

AlephVision helps managers make informed decisions based on current information without the need to request and wait for reports.

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AlephVision is designed to solve the problem of information availability. Designed to complement existing ERP, CRM or data warehousing solutions, it exists alongside those systems, costing significantly less, and being significantly easier to implement.

AlephVision is a decision support system that improves the company bottom line by allowing management to quickly spot excessive costs or demand spikes, predict revenues, improve planning, and notice new opportunities.

The purpose of AlephVision is to make up-to-date information available to management, bypassing existing barriers: once AlephVision is in place, organizational structures, IT contracts, and IT departments no longer play a role in information flow.

Designed to ingest and process real-time data (events) from multiple sources or systems, it provides an alternate information path within the company. It will never replace an ERP system or a data warehouse, but it will provide an alternate information path and (possibly approximate) real-time view of the company.

The system is compatible with multiple data sources through flexible APIs, designed to take raw event data at the source (where it can usually be gathered quickly and easily), rather than require costly and time-consuming integration efforts.

AlephVision presents individually tailored information. We work with each client to determine what needs to be computed and shown. You see the information that you need to manage your business.

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There is a big difference between information existing in one of the systems and information being available now. “My ERP system could generate this if I requested a report from IT” is not the same as seeing up-to-date information at any time, 24/7, on your own screen, without asking anyone.

Modern enterprises deal with data stored in multiple systems. Merging data to produce useful information often involves manual work with spreadsheets. There are few tools that allow companies to codify these processes, and even fewer that are flexible enough to take input events from multiple sources and process them in real time.

Existing data processing pipelines can often be made shorter, resulting in tremendous cost savings. Even approximate information is valuable if it can be produced quickly. Finding out that a remote exploration site is unprofitable two months faster than through the usual accounting channel can be worth millions in cost savings.

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It takes a long time for data to make its way from the source to upper management levels. Data needs to be gathered, preprocessed, merged from multiple sources, reports generated or updated manually, spreadsheets edited, reviewed, and finally E-mailed or printed and delivered, often passing through multiple organizational hierarchy levels. A lot of the work is manual. Even if an ERP system is in place, actually getting up-to-date information usually involves asking someone to generate an appropriate report.

The result is a long information pipeline: as new data comes in, it is not immediately presented to decision makers, but instead enters the pipeline and becomes visible days, weeks or even months later. Reports are often prepared in an ad-hoc manner, when requested, instead of regularly, as a process.

AlephVision shortens the information pipeline: new data is immediately processed as it becomes available, getting incorporated into reports, graphs and predictions. As a result, managers always have up-to-date information necessary to make decisions.
APPLICATION: INFORMATION MERGED FROM MULTIPLE SOURCES

Where multiple systems exist, getting information often involves getting reports from several places and combining the information using spreadsheets. There is often no single system that can be tasked with interfacing and information merging, and building one from scratch might not be cost-effective. AlephVision fills that void by providing an easy-to-interface solution.

While most reporting and visualization tools require data in a unified form, AlephVision was specifically designed to perform the difficult task of merging data. Connecting ad clicks, marketing expenses, and subsequent revenue is no longer a problem.

AlephVision can combine data from multiple systems, process it in real-time and display up-to-date information continuously.

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APPLICATION: GATHERING DATA IN THE FIELD

Using distributed quick data entry it is possible to gather the most important information quickly, and have it instantly appear in reports and predictions. Normal data processing pipeline introduces a delay before the information is presented.

Invoices can be sent through normal channels to accounting, while most important data (expense type and amount) can be quickly entered directly into AlephVision in the field. The data-entry interface is designed to be intuitive, easy to use and involve minimal effort.

Implementing this system results in expenses being immediately processed and shown to management. Finding out that a remote site is unprofitable two months faster than through the usual accounting channel can be worth millions. A side benefit is that the alternate data path provides additional verification, improving transparency.
The data-processing engine within AlephVision can be used not just for displaying information, but also for predictive analytics. Its real-time nature means that innovative instant recommender systems can be built.

Other company-specific signals based on streams of data can also be generated. Scalability of AlephVision means that given sufficient computing resources, operating on large-volume streams of data such as call record, location or purchase data is possible.

Based on patterns of customer behavior, systems can be created that:

- optimize the allocation of advertisements to ad slots, maximizing publisher revenue,
- instantly generate coupons based on customer purchases and location,
- optimize call center operations by selecting appropriate offers, personalized for each customer, taking customer response into account,
- predict customer churn.

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APPLICATION: E-COMMERCE ANALYTICS

Most analytics products show data, not information. Fablitics is an instance of AlephVision built specifically for E-commerce. Based on a ground-up rethinking of what analytics software should do, it is focused on fundamental business concepts: customers, products and sales.

Instead of measuring simple conversion rates between pages on a web site, our systems analyze the full business cycle. By tracking customers from the point of acquisition, through their activity on the web site, right through purchase, the feedback loop gets closed: actual sales data gets connected to the costs of acquisition (media campaigns). Advertising costs can then be compared to actual income obtained as a direct consequence of those campaigns. Events can influence other data in the past. Information about a sale or a signup may come much later (and from a different system) than the event reporting an advertisement click-through — but both events can be merged and advertisement performance will be reported correctly.

Continuously updated sales projections are incorporated into the product, presenting a window into the future and enabling informed decision-making.

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DATA SOURCES

The system is compatible with multiple data sources through flexible APIs, designed to take raw event data at the source (where it can be gathered quickly and easily), rather than require costly and time-consuming integration efforts. Simple APIs for reporting events make it easy to feed data to AlephVision.

Events can be gathered from (among others):

- web pages,
- mobile applications,
- backend order processing systems,
- CRM applications,
- ERP systems,
- custom quick data entry solutions,
- custom sources capable of generating events.

SECURITY

Security is taken very seriously. Connections to/from the data processing engine can be encrypted. Data is carefully guarded, accessible only in aggregate form through the SSL-protected dashboard, and every effort is made to protect against unauthorized disclosure. The entire processing engine can also be implemented on client premises using client hardware, if necessary.

SCALABILITY

AlephVision is implemented as a distributed, scalable stream-processing system using Apache Storm, Apache Kafka, Apache Zookeeper, Hadoop (HDFS) and JVM technologies as a foundation. Redundancy is built into every element of the system and there is no single point of failure. Everything we build is designed to work in real-time, on multiple machines, and be scalable to millions of events per second. This has been made possible by recent software technologies and improvements in computer performance.

RETROACTIVE IMPROVEMENTS

AlephVision continuously updates and recomputes data. When a new way of analyzing or visualizing the data is implemented, there is no need to wait for new data to arrive. New functionality gets applied retroactively to data already gathered, just as if it had been there in the first place.