Company profile

ConceptWave Software

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Contents

Click on a heading to jump to the section.

1 Executive summary ................................. 1
2 Financials and basics .................................. 2
3 Customers and markets .............................. 6
   3.1 Customer characterisation .......................... 8
   3.2 Customer feedback on ConceptWave
       Swisscom ........................................... 9
       Hutchison .......................................... 9
   3.3 Partner feedback on ConceptWave
       Hewlett-Packard ................................... 11
       IBM .................................................. 11
       GISDATA .......................................... 12
4 Analysis ................................................. 13
   4.1 Strengths ............................................ 13
   4.2 Weaknesses ......................................... 13
   4.3 Threats .............................................. 14
   4.4 Opportunities ....................................... 14

List of figures and tables

Figure 1.1: ConceptWave’s revenue by sub-segment, 2010 ........................................... 1
Figure 2.1: ConceptWave’s products ................................................................. 3
Figure 2.2: ConceptWave’s position in Analysys Mason’s telecoms software market segmentation ... 5
Figure 3.1: ConceptWave’s revenue by product and services, 2010 .................................. 7
Figure 3.2: ConceptWave’s revenue by service segment, 2010 ........................................ 7
Figure 3.3: ConceptWave’s revenue by region, 2010 .................................................. 8
Figure 3.4: ConceptWave announced customers by region, 2010 ..................................... 8
Figure 3.5: ConceptWave announced customers by tier, 2010 ........................................ 9

Table 2.1: ConceptWave company data ................................................................. 2
Table 2.2: ConceptWave’s solutions ........................................................................ 3
Table 2.3: ConceptWave’s products ......................................................................... 4
Table 3.1: Sample of some significant ConceptWave telecoms software customers ............... 6
1 Executive summary

ConceptWave Software (ConceptWave) is a Canadian-based independent telecoms software vendor that grew from an order management software supplier into a supplier of a range of software products and services for managing the overall lifecycle of products and customer orders. ConceptWave’s offerings map into two software areas in the Analysys Mason taxonomy:

- order management, ConceptWave’s traditional product, in the service fulfilment stack, providing technical order decomposition and implementation sequencing of automatic and manual operations to fulfil services
- customer relationship management (CRM), including a range of data management and operations functions for rapidly creating, managing and supporting new products and customers’ orders for those products.

Worldwide, CSPs of all sizes use ConceptWave’s products, including its order management system and its master catalogue. ConceptWave successfully positioned its order management technology in the CRM space to provide what Analysys Mason calls customer order orchestration – validating, decomposing, orchestrating and tracking multi-product and service orders, and making the order status information available to customer-facing systems. Further product expansions into the catalogue, order capture, product lifecycle management (2009) and CRM space (2010) have greatly expanded ConceptWave’s footprint.

ConceptWave’s products are an essential part of the service fulfilment and product and service catalogue offerings of leading OSS providers such as Accenture, HP, IBM, NSN and Telcordia.

The company, based in Mississauga, Ontario, Canada was founded in 2000 by Mr Zarar Rana, the President and CEO, and Mr Ivan Chochlekov, CTO and VP Product Development.

As a privately held company, ConceptWave does not disclose its financial information. Analysys Mason’s estimate of ConceptWave’s revenue from its sales of software products and closely associated services to CSPs in 2010 was in the USD25–30 million range. Analysys Mason believes that ConceptWave’s revenue has on average been increasing by 15–20% per year over the last several years, despite the worldwide economic difficulties, as the product line has expanded and the company has taken on more services work.

*Figure 1.1: ConceptWave’s revenue by sub-segment, 2010 [Source: Analysys Mason, 2011]*
2 Financials and basics

Communications software licences and product-related services sales to CSPs generate most of ConceptWave’s revenue. For many years, it provided order management software, many sold through reseller arrangements. ConceptWave has undergone a growth spurt within the last three years as CSPs have adopted the concepts of customer order orchestration and a master catalogue, both strong products of ConceptWave.

Table 2.1: ConceptWave company data [Source: Analysys Mason, 2011]

<table>
<thead>
<tr>
<th>Year founded</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headquarters</td>
<td>Mississauga, Ontario, Canada</td>
</tr>
<tr>
<td>Company URL</td>
<td><a href="http://www.conceptwave.com">www.conceptwave.com</a></td>
</tr>
<tr>
<td>Stock symbol</td>
<td>Private</td>
</tr>
<tr>
<td>President and CEO</td>
<td>Zarar Rana</td>
</tr>
<tr>
<td>Revenue 2010</td>
<td>USD 25–30 million (estimate)</td>
</tr>
<tr>
<td>Employees</td>
<td>170</td>
</tr>
<tr>
<td>Product segment(s)</td>
<td>Service fulfilment (order management), customer care (CRM – master catalogue and customer order orchestration)</td>
</tr>
<tr>
<td>Geographical focus</td>
<td>Worldwide</td>
</tr>
<tr>
<td>Primary products</td>
<td>Product catalogue, service catalogue, order management, order negotiation, master catalogue, customer order orchestration, customer self-care portal, unified CSR workstation</td>
</tr>
<tr>
<td>Key partners</td>
<td>Accenture, HP, IBM, NSN, Telcordia and other premier resellers</td>
</tr>
</tbody>
</table>

ConceptWave’s traditional strength is in software products for order management functions in the service fulfilment process. It was ranked as one of the top 12 vendors in that space in Analysys Mason’s Service fulfilment market share report 2009. In the past several years, ConceptWave has used its core technology to enter what it calls ‘catalog management,’ providing a master catalogue to which other product and service catalogues are synchronised, supporting the rapid and efficient introduction of new services into the BSS/OSS infrastructure. It has also positioned its order management technology into the customer order orchestration area. These last two Analysys Mason considers the master catalogue and customer order orchestration as CRM functions, part of customer care, giving ConceptWave a foothold in that growing area. Further product expansions have taken ConceptWave further into the CRM realm, with customer self-care, CSR unified workstations, and customer and product data being added. Additional product management capabilities for the rapidly-expanding set of products offered by CSPs have further expanded the portfolio.

Table 2.2 provides a list of ConceptWave’s solutions for the CSP market.
Table 2.2: ConceptWave’s solutions [Source: Analysys Mason, 2011]

<table>
<thead>
<tr>
<th>Solution</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>ConceptWave Rapid CRM</td>
<td>Provides targeted CRM capabilities. Includes Customer Self Care, Customer Information Management, Customer Service Registry, and Unified Workstation.</td>
</tr>
<tr>
<td>ConceptWave Order Care</td>
<td>Provides service fulfilment and customer order orchestration functions. Includes Catalog Management, Order Management, Order Negotiation and Order Analytics.</td>
</tr>
</tbody>
</table>

Figure 2.1: ConceptWave’s products [Source: ConceptWave, 2011]
Table 2.3: ConceptWave’s products [Source: Analysys Mason, 2011]

<table>
<thead>
<tr>
<th>Product</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Self Care</td>
<td>Provides a web-based self-care facility to allow end clients to quote, order, inquire and manage their services, providing end-to-end lifecycle management. Enables customers to change/modify/self-serve their services, any time, any place. Can use skin with the CSP's branding, offer and logos.</td>
</tr>
<tr>
<td>Customer Information Management</td>
<td>Customer Information Management integrates with Order Management, Quote Management and Service to provide customer information via a centralised interface. Has gateway interface to launch tasks, processes, look-ups, real-time changes, and validations. Follows NGOSS standards.</td>
</tr>
<tr>
<td>Customer Service Registry</td>
<td>Customer Service Registry is a repository for a client’s product, service and resource information.</td>
</tr>
<tr>
<td>Unified Workstation</td>
<td>Unified Workstation integrates with Customer, Order, Quote and Inventory Management, among others, to provide a single call center desktop solution for CSRs.</td>
</tr>
<tr>
<td>Catalog Management</td>
<td>Taps into data repositories within existing systems, such as CRM or billing, without the need to migrate product and catalogue information to a central location. Instead, it synchronises and federates data in real time, providing the information needed for product lifecycle management.</td>
</tr>
<tr>
<td>Order Management</td>
<td>Order Management decomposes complex orders and, using a rules-based workflow engine, sequences actions for order handling and repair processes. Provides order validation and provisioning capabilities. Can integrate with XML-based interfaces, SOAP, JMS and HTML. Conforms to the TMF SID. It also enables interconnection between trading partners, and can manage orders across partner networks and processes.</td>
</tr>
<tr>
<td>Order Negotiations</td>
<td>Provides CSR capabilities for presenting products and promotions to customers, account setup, and capturing or changing the orders. Integrated with Product Catalog. Supports customised presentation.</td>
</tr>
<tr>
<td>Order Analytics</td>
<td>Order Analytics collects data during the order lifecycle for use in management reports. Allows monitoring of operational KPIs by order or services. Reports include historical data, trend analysis, and measure order metrics against customer profitability. Can analyse and assess customer profiles for up-sell activities, based on campaign metrics, ARPU, profitability and other factors.</td>
</tr>
</tbody>
</table>

Analysys Mason identifies 25 functional categories of OSS investment in the telecoms market. Figure 2.2 below illustrates the full set of these categories and the way they are grouped into segments. Analysys Mason yearly publishes the market share and five-year forecast for each of the segments (as well as consolidated market share information).

ConceptWave has products in three of these 25 areas within service fulfilment and customer care. ConceptWave’s original order management system fits into the service fulfilment category. Its master catalogue and the use of the order management system in customer order orchestration fits into the CRM area in the customer care segment as does its Unified Workstation. Analysys Mason recently added centralised master catalogues and customer order orchestration systems to the CRM sub-segment of customer care. This was done because of their increasing use in BSS and OSS architecture to centralise the data from all product and service catalogues. These can simplify and speed new services introduction, and orchestrate the order management process for complex orders. ConceptWave also has the self-care system in the customer interaction sub-segment.

See Analysys Mason’s Service fulfilment market share report 2009 and Customer care market share report 2009 for an overall view of the service fulfilment and customer care markets, respectively.
Figure 2.2: ConceptWave’s position in Analysys Mason’s telecoms software market segmentation [Source: Analysys Mason, 2011]


### 3 Customers and markets

Of the 23 announced implementations of ConceptWave’s order and catalogue management products in place in 2009, 13 were through channel partners (resellers and OEM) and 10 were direct. The customer list continues to grow – even in 2009, during the recession, there were four announced projects, while in 2010 ConceptWave enjoyed nearly a dozen new projects and expansions. Its implementations include cable TV, wireless and wireline CSPs.

**Table 3.1: Sample of some significant ConceptWave telecoms software customers [Source: Analysys Mason, 2011]**

<table>
<thead>
<tr>
<th>Customer</th>
<th>Product type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atria Networks</td>
<td>2010 implementation of product and service catalogue, order negotiations, order management and order analytics for Internet access, wide-area network solutions, carrier services, and data centre services.</td>
</tr>
<tr>
<td>AT&amp;T</td>
<td>Reportedly, an OEM deal through Telcordia of its Exception Handler product. Enterprise-wide order exception and work item handling across all services. Integrated with many legacy Telcordia products. Large volume operation with over 500,000 exceptions per day handled by over 2000 personnel.</td>
</tr>
<tr>
<td>Belgacom</td>
<td>2009 implementation of enterprise-wide catalogue management for residential offerings including TV, internet, wireless and residential telephone service.</td>
</tr>
<tr>
<td>Bell Canada</td>
<td>Deployed in 2003, integrated with 13 legacy systems with over 2000 users for order tracking, jeopardy management and exception handling for xDSL and order entry and management for local voice service. Additional 2010 project includes order and catalogue management for all toll-free products and services.</td>
</tr>
<tr>
<td>Comcast</td>
<td>2008 implementation of order and order exception handling, including triple play orders. Supports 21 million customers.</td>
</tr>
<tr>
<td>Portugal Telecom (PT)</td>
<td>2008 implementation of order management and catalogue management for all next-generation products and services.</td>
</tr>
<tr>
<td>Saudi Telecom (STC)</td>
<td>2008 OEM deal through Telcordia. Order and catalogue management for all NGN products and services.</td>
</tr>
<tr>
<td>Swisscom</td>
<td>HP 2005 implementation of order management and product catalogue for next-generation services.</td>
</tr>
<tr>
<td>Videotron (Canada)</td>
<td>Implemented 2008. Order entry, management, and catalogue management for all residential and commercial products and services, including quadruple-play packages.</td>
</tr>
</tbody>
</table>

ConceptWave had a focus on licence sales for many years, with many of its implementations being delivered by its OEM partners as the underlying order management software platform. This was particularly true of Telcordia, where the ConceptWave system was embedded within the Telcordia Exception Manager and the Telcordia Expediter products. In the last two years, ConceptWave has taken on more direct sales and services itself. However its partners program has been growing, moving it more towards being a solution provider. Figure 3.1 shows the estimated breakdown of ConceptWave’s revenue by products and services.
The value of order and catalogue management are greatest when the orders are complex, as is the case in business and broadband services, leading to a revenue pattern by service segment as shown in Figure 3.2. A new area for ConceptWave is the mobile market where it is supporting the increasingly complex orders including service plans, handsets and add-on services for both the mobile CSP and its channel partners. This should provide additional growth opportunities.
ConceptWave’s geographical reach is shown in Figure 3.3. The pattern is influenced strongly by its longstanding OEM agreement with Telcordia, which has strong market presence in North America and Europe, Middle East and Africa (EMEA). Its other resale and SI partners, including IBM and HP, should provide increasing coverage of the CALA and APAC markets.

*Figure 3.3: ConceptWave’s revenue by region, 2010 [Source: Analysys Mason, 2011]*

ConceptWave has engaged in no M&A activity.

### 3.1 Customer characterisation

Figure 3.4 characterises the customers whose identities were revealed to Analysys Mason. Most of them are in North America, several through Telcordia, with EMEA implementations representing much of the rest.

*Figure 3.4: ConceptWave announced customers by region, 2010 [Source: Analysys Mason, 2011]*
The ConceptWave customers have a good spread in size. About 37% are tier 1 (CSPs with greater than USD10 billion revenue), 42% tier 2 (USD1 billion to USD10 billion) and 21% tier 3 (less than USD1 billion).

Figure 3.5: ConceptWave announced customers by tier, 2010 [Source: Analysys Mason, 2011]

3.2 Customer feedback on ConceptWave

Analysys Mason had an opportunity to interview several ConceptWave customers that have implemented ConceptWave’s order and catalogue management solutions.

Swisscom

Hanspeter Etter (Head of Customer Service, Swisscom Wholesale) and Urs Waltenspuel (Data & Broadband Portfolio Manager) described how Swisscom Wholesale has been replacing multiple legacy order management systems with ConceptWave software products via a series of rolling projects that began in 2007.

The initial project, which took less than a year to complete, focused on order management for leased lines. ConceptWave provided the platform to realise product catalogue, pricing, order handling and commercial inventory parts of the system, which were interfaced with Swisscom’s, various inventory and activation systems, and its billing systems. HP did much of the systems integration and configuration work, with ConceptWave and Swisscom IT taking part. ConceptWave was chosen because of its order management product that Swisscom evaluated as being able to be quickly implemented and provide a flexible order management system, ConceptWave’s reputation for good customer service and its on-going relationship with HP.

The successful initial implementation has led to phased projects to extend the system’s use to include products like leased lines voice interconnect, various facility sharing products and now in 2011, carrier Ethernet. This phased approach is preferred over a ‘big bang’ to reduce the risk and operational disruption
inherent in even small-scale transformation projects. Even within the individual phases, a rolling method is being used – individual customers are being moved over periods of up to six months from one set of systems to the new one. This has reduced the risk, providing ample time for training and debugging of the systems and processes.

Swisscom commented that its interactions with ConceptWave have been very satisfying, with ConceptWave having demonstrated that the company is “very flexible, giving us the attention we need.” They also reported “good cooperation and a high level of competence demonstrated by the people we work with.”

The new system provides greater flexibility in changing Swisscom’s product set and prices by turning what formerly was an IT project into a simple software configuration job. The six months it used to take to schedule and implement a new IT project to introduce a new product has been reduced to only one month. In addition, replacing multiple legacy systems with one system has allowed greater visibility into the operations of the business. “We understand much better how our business is operating” through the consolidated reports available.

Swisscom reports that planned software updates will greatly increase the usability of the system, providing a much more intuitive user interface. But throughout the whole process, they opine that “in the end, it is cooperation between people that makes a project work. ConceptWave and HP people worked with us to understand our business and helped make us more efficient.”

Hutchison

Eric Chan, the Head of Fixed Network Systems in Hutchison Global Communications Limited (HGC), spoke to me about their ongoing BSS/OSS transformation project. Two and a half years ago, HGC created a foundation base of systems, implementing SOA architecture components, operational data stores, and other base components as the first phase of a comprehensive operations transformation project.

Now in phase two, the transformation project has moved into the business transformation phase. ConceptWave’s Order Care suite is a critical part, providing a flexible order management function for multiple play or fixed-mobile convergence offerings. “A flexible order management system is especially required since we are launching new products and complex product bundles very quickly these days,” said Mr Chan. The ConceptWave product catalogue, order negotiation, and order management modules are a part of the architecture.

ConceptWave was chosen above the considerable competition because of its adherence to TMF standards, its strong SOA architecture and its compatibility with HGC’s current systems integrator, Hewlett Packard. In the proof of concept trial, ConceptWave demonstrated its ability to support new services and prices by configuration, not coding, even by non-IT trained people.

Now in the middle of phase two, which started mid-2010, the residential consumer market is being supported by the new platform, along with a new set of operations practices. Next will be the commercial market. Already completed is a “Business Discovery Workshop” where key HGC commercial market users reviewed a prototype of the system and provided input on the user interface and business processes. Their comments will be integrated into the system, which is planned to be available for them to configure to support new products and product bundles, without the need for an IT project.
“The Hong Kong market has cut-throat competition,” said Mr Chan, “We need to adjust quickly to implement new ideas and make bold competitive moves. ConceptWave allows us to do that.”

3.3 Partner feedback on ConceptWave

ConceptWave’s resale partners include Telcordia, IBM, and HP. Each of them have made ConceptWave’s software an essential part of its product offerings to its customers. Analysys Mason had an opportunity to speak at length with three of them.

**Hewlett-Packard**

Rolf Eberhardt, former Global Practice Principal for Fulfillment at HP, detailed a number of projects that HP has engaged in, using ConceptWave products. HP has implemented ConceptWave’s order management in traditional service fulfilment stacks, for order orchestration in a customer order orchestration function, for customer self-service portals and for doing real-time data translations between traditional full-featured CRM systems and OSS systems that need that information.

He emphasised that HP saw some key strengths of ConceptWave:

- flexibility of the services model and the interfaces between systems
- an architecture that allows OM automation to be incrementally introduced into the CSPs operations in multiple six to eight week incremental projects, rather than requiring a ‘big bang’ transformation project
- scalability of the order management system, with benchmarks of over 180,000 orders an hour achieved for a customer implementation
- ability to configure for handling in-flight order changes by the customer, described by Rolf as the “holy grail of OM.”

Mr Eberhardt said that HP has been investing considerable effort into building practices around the implementation of ConceptWave products.

**IBM**

Robert Pucci was IBM’s CTO of communications solutions in the Latin American region when I spoke to him. He was the technical lead for BSS and OSS implementations for IBM at that time.

The ConceptWave order management system has been a part of IBM’s BSS/OSS reference architecture for some time. IBM has used it for both product and technical catalogue functions. IBM values the openness of the catalogue, the SOA-based interfaces, and the fact that it is catalogue driven. He feels that this differentiates ConceptWave for many of its competitors. It has allowed IBM, in its systems integrator role, to build dynamic workflows based on product catalogue information instead of having to hard code many different versions of the workflows. As an example, ADSL and xDSL can have exactly the same workflow snippets, but different flows overall, with the differences driven by the differences in the data in the product and service catalogues.
GISDATA

Boran Loncaric is an executive at GISData, a Telcordia partner, with approximately 200 employees. His company has implemented a several instances of the ConceptWave order management system, which Telcordia OEMs. Boran characterises the ConceptWave system as an integrated (service) catalogue driven order management system. They implemented this system for Croatia telecom, a Deutsche Telekom subsidiary in central Europe, supporting over 1 million broadband customers. The project with Croatia telecoms was contracted in June of 2009 and went live 1 July 2010. A large portion of the project was identifying the processes for IP products and services. The services supported are all DSL, IPTV and so on – no voice.

GISDATA presented a paper at TeleManagement Forum in Nice on this in 2010. It also had a Forumville session on this on ‘order orchestration’.
4 Analysis

ConceptWave has been one of the specialists in order management software for service fulfillment for nearly a decade. Its expansion of the use of its core platform into the master catalogue and customer order orchestration functions and further into CRM and customer interaction is expanding its opportunities.

4.1 Strengths

ConceptWave has a top-tier list of resellers. Its Order management product is an essential part of the service fulfillment architectures of IBM, HP and Telecordia. These agreements have served it well for many years, giving it credibility and sales reach. ConceptWave’s revenue expansion during the last two years means the company can continue to better support its reseller partners and has the business credibility and resources to market directly to major CSPs.

The ConceptWave order management system has proved itself to be solid in large-scale, high-volume applications in companies such as AT&T, giving it high technical credibility.

ConceptWave is positioned well where CSPs have multiple vendors providing OSS and BSS functions. These multivendor architectures will persist for some time since large transformation projects have fallen out of favour in the last several years. Formerly, wide swaths of a single vendor’s integrated set of systems would have been replaced. Current transformation projects are tend to be much more modest in size and phased to reduce the risk.

The expansion of ConceptWave’s Order Management product into the customer order orchestration space puts it in a growing new market. Its master catalog, synchronising service and product information across the myriad of catalogs in the BSS and OSS areas, provides new revenue streams and growth possibilities.

ConceptWave’s recent expansion into adjacent product areas is expanding its portfolio, moving it towards becoming a full-service CRM and order management vendor for those CSPs desiring basic functionality, but flexible and easily-configurable systems.

4.2 Weaknesses

Although ConceptWave is a long-time expert in order management systems, its master catalogue and customer order orchestration functions are relatively new in the market and will need to prove themselves in large installations, working with other vendors’ catalogues and fulfilment systems.

The company currently has a growing presence in mobile markets, but needs public reference accounts.

As a smaller vendor, ConceptWave’s pricing power is limited as it deals with much larger ISVs and SIs that have other alternatives. It also has the limitation of low direct sales coverage in the emerging and developing markets, depending upon its partners.
Current procurement trends favour the larger, all-in-one, pre-configured multi-system vendors. ConceptWave recent product line expansion is moving it in this direction, but also placing it in the path of other basic CRM vendors such as Microsoft with its Microsoft Dynamics CRM offering.

4.3 Threats

ConceptWave must compete with companies such as Amdocs and Oracle that have pre-integrated integrated systems that include most of the functions ConceptWave products provide. As a specialist ISV, it must constantly stay ahead of these competitors in feature functionality.

With ConceptWave’s excellent channel partners comes the constant threat that they will build their own solutions or go to another supplier, although they have built substantial practices around them and are currently building their own software assets on top of them.

The all-in-one regional providers such as AsiaInfo, Clarity and Comarch are entering ConceptWave’s product area. These will be competing with ConceptWave for CSP business in many of the developing regions where their reputations are strong.

There is a constant threat of CSPs deciding to build these functions themselves, using open source software and standard business process languages and catalogue-driven architecture although the trend is towards COTS software.

4.4 Opportunities

The mobile CSP market represents a good opportunity for ConceptWave. CSPs’ constant and rapid introduction of new services and increasingly rich and complex service bundles makes the ConceptWave products very valuable to them.

Similarly, developing markets are a good target area for ConceptWave. These CSPs are experimenting with new business models that require the kind of offer and operational flexibility that ConceptWave products provide.

As the product bundles of established CSPs continue to grow and become more complex, the value proposition for them also grows. Home networking, in particular, should be a good application area for the ConceptWave solutions in the future.