

## TECHNOLOGY AUDIT

# ciboodle







Graham Technology




## BUTLER GROUP VIEW

### ABSTRACT

Graham Technology's ciboodle is a customer interaction platform that is built to manage all customer communications, such as e-mail, telephone, and chat. It is based on the company's core Business Process Management (BPM) platform GT-X, and incorporates a pre-configured agent desktop as well as a range of customer-centric processes. Providing good customer service is still a challenge for many organisations because the tools to support customer-facing staff can be complex to learn and to mould to fit how the organisation wants to operate. Because ciboodle is like a set of building blocks it is relatively quick to construct processes but also to then modify them over time. The underlying technology has been proven in many deployments over the years, and incorporates a natural language processing capability. At present there is no .NET implementation. Organisations that are looking to upgrade or replace contact centre software in order to improve customer service should include ciboodle on their shortlists, and the product can be viewed at the company's demonstration centre or on-line. Full evaluations are best achieved via a proof of concept project.

### KEY FINDINGS

- |   |  |
|---|--|
|  Graham Technology has 12 years experience in the customer-centric BPM market. |  Process models are executable and thus can be changed rapidly if required. |
|  Includes simulation capability for business processes.                        |  A building-block concept allows processes to be rapidly assembled.         |
|  Processes are modelled in BPMN.   |  There is no .NET implementation of ciboodle.                               |

Key:  Product Strength  Product Weakness  Point of Information

### LOOK AHEAD

Continued development of ciboodle to suit the needs of customers and prospects is likely to cover more vertical market requirements as well as enhancing the workforce management aspects of the product.

## FUNCTIONALITY

### *Product Analysis*

Customer service is an area that many organisations struggle with, often seeing it as a necessary cost but one that can be complex to manage. The challenge is that to deliver excellent customer service requires the use of skilled staff to interact with customers, and this is often impossible to deliver once the number of customers scales up. A corner shop owner can deliver good customer service because he or she will personally know the vast majority of customers, but a large utility cannot possibly hope to do the same. The obvious choice – automation, if done badly, can damage customer satisfaction – but if done well it can be a positive experience for many customers. The challenge is to automate customer interactions well, and keep track of all of these interactions regardless of how they are made. Clever use of technology can help here, and this is what Graham Technology provides with its ciboodle product. The word ‘caboodle’ is informally used to mean ‘the whole lot’ – here ciboodle conveys a similar concept in that it covers all of the ways that customers might communicate with an organisation.

ciboodle is marketed as Customer Interaction Management (CIM) software, focusing on the management of a wide range of interactions with customers, including e-mail, telephone, and Web chat. The solution is based on Graham Technology’s established Business Process Management (BPM) product, GT-X, but bundles customer-facing building blocks, such as an agent desktop, customer, product, and agent management, work routing, and case handling. It also incorporates executive dashboards, and a sales engine. The product’s contact and channel management capability supports multiple channels such as the Web, portable devices, text (SMS) messaging, and voice interactions, as well as the traditional contact centre. Adding to the voice interactions is the company’s Natural Language processing ability, based on its agent247™ product (which Butler Group reviewed in May 2006). Thus a customer’s interaction in a Customer Relationship Management (CRM) scenario can be a blend of automated responses and communication with human agents, with all of this information captured and available to both parties simultaneously.

By providing a number of pre-configured tools (including screens and processes) that focus on customer interactions, ciboodle reduces the time to deploy a solution significantly over any DIY approach, and leaves the way open for rapid deployment of future changes as they become needed. The product therefore requires significantly less professional services to deploy than a packaged CRM solution, and the roll-out to users and customers is much quicker. Because ciboodle supports a number of channels, it can reduce the cost of customer service by enabling the most cost-effective channel for the customer profile, but rules can be defined to override this when necessary.

The ciboodle offering differentiates itself from other BPM and CRM offerings by being a combination of the two concepts – customer-centric yet highly flexible. From a technical perspective it uses Business Process Modelling Notation (BPMN) to model processes as well as UML, and its processes are interpreted at runtime, making them very easy to change as necessary. It includes simulation capabilities so that users can model and measure the impact of any proposed change in process before deploying it. There are few, if any, other vendors offering such an established blend of modelling, simulation, and pre-built components at this time.

Although the product incorporates work routing, it does not handle staff shifts or comprehensive workforce automation (although it does integrate with such systems in a large call centre environment). In addition, the underlying process engine is Java centric, and there is as yet no deployment on the .NET platform, although Graham Technology estimates that such an implementation could be available within five months if requested by a client.

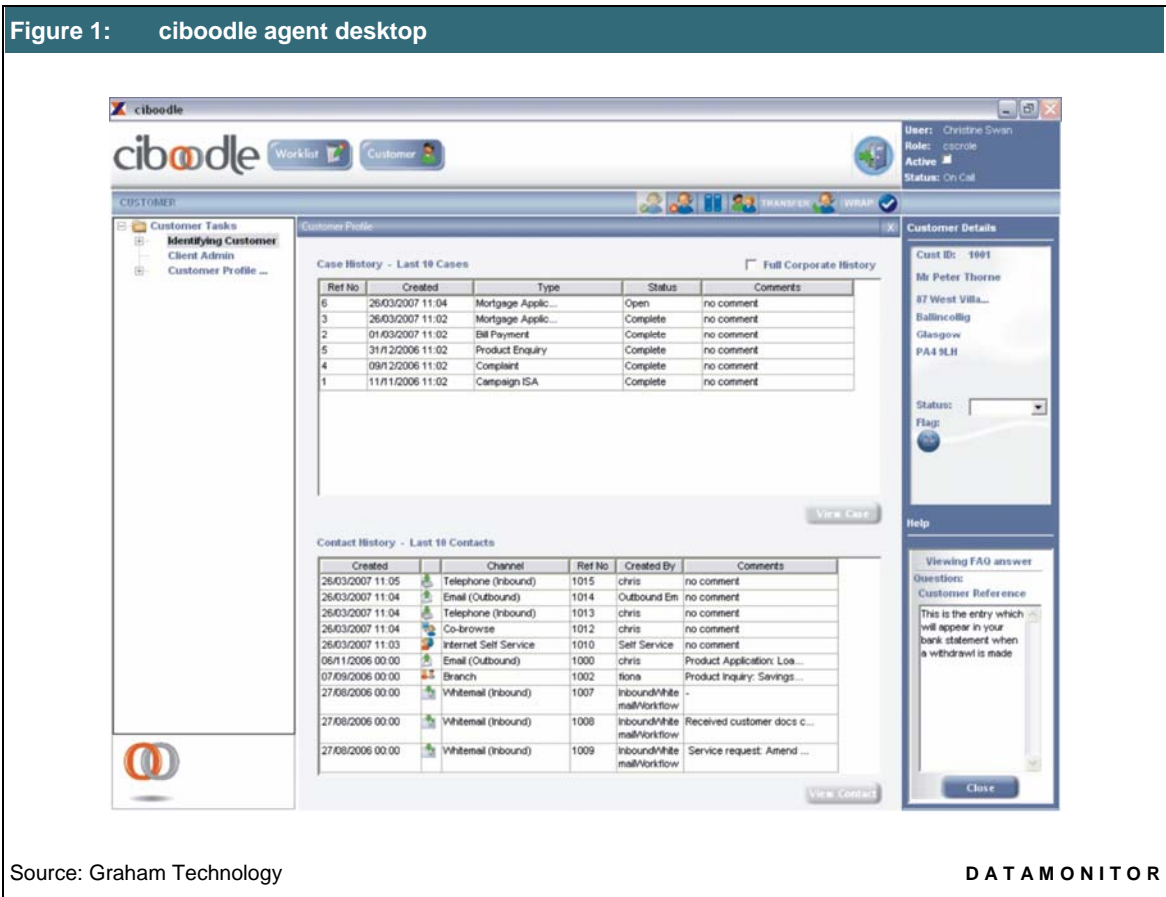
**Product Operation**

ciboodle should be regarded as a CRM system, but one that is highly flexible and that is moulded during deployment to suit the processes that are already in operation within the organisation (and can then be modified over time as necessary). It is not a CRM package at all; ciboodle provides a core frameworks and building blocks for managing customer interactions, and each ciboodle implementation is quickly constructed to suit the particular project. ciboodle has its own customer database definition, and can also co-exist with existing CRM products.

Out-of-the-box, ciboodle covers four main aspects of customer interactions – pre-defined business processes around customer management; standard mechanisms for integrating with different channels; comprehensive case management and handling functionality, and work routing (including task tracking and escalation processes). These capabilities are supported and enhanced by comprehensive operational reporting and dashboards to provide visibility into processes and help evaluate opportunities for ongoing improvement.

*Contact, Customer, Product, and Agent Management*

A Web-based agent desktop comes as part of the solution, which provides the main interaction for an internal user. It can be incorporated into, or be used as, a portal if required. An example agent desktop is illustrated below:



The agent desktop has been designed to be intuitive and presents a consolidated view of customer, case, campaign, and product information. The processes supported include customer identification and verification, agent and role administration, contact and channel management. Relevant BPM capabilities available, include real-time interactions, workflow, activity monitoring, event-based processes, and simulation. Many BPM tools are not specifically geared towards the high volumes and multiple channels that ciboodle is, giving it a distinct advantage in such situations.

The desktop includes a full history of both in and outbound contacts, and all the data associated with those contacts (such as scanned letters, e-mails, fax, voice recording and transcriptions, chat scripts, and so on) are stored alongside the contact. All process activity instances are recorded, as well as the outcome of each interaction. It is possible to automate the collection of outcomes, for example, to use third-party emotion recognition systems to endorse the customer's current level of satisfaction. The desktop also incorporates analytical information, and is fully configurable. An interaction session can also be transferred to another agent if needed, or to a manager.

When designing an interaction process, business rules can be set up at each point and then simply altered over time if necessary. For example, if the same customer contacts the organisation more than once within a two-day period, it may be valuable to ensure that they are directed immediately to a human agent rather than starting with an automated data collection process, in case there is an issue that needs rapid resolution. Changing a process to support this is extremely rapid and the changed process can be deployed immediately. Once created, processes can be incorporated within others using a drag-and-drop method – for example, an automated process can be dragged into a workflow.

There are built-in document viewers for copies of documents; for example, it supports Adobe Reader for PDF and Microsoft readers for Office documents.

#### *Channel Integration*

During a customer interaction, the agent desktop can be integrated with an inbound call, and can also then integrate to outbound e-mail, for example, to provide a customer with follow-up information. All events are tracked during an interaction, including comments logged at the wrap-up phase of the call.

Customers can use a self-service capability using exactly the same process channels as the agent would. The customer can select to chat with an agent if they need to ask more information, and this chat session is then 'popped' on to the next available agent's desktop – the agent and the customer then share the same session; it is truly a collaborative solution.

ciboodle supports bi-directional channel interaction via telephone, e-mail, kiosk, Web, chat, and SMS. A process is constructed once, using graphical tools, and is then deployed to multiple channels. Processes can also be transferred from one channel to another. A wide range of interfaces are available including Asterisk, AJAX, image storage, Cisco, Genesys, Nice, SMS, and VoiceXML, supporting channels such as Web, text chat, PDA, mobile, and IVR.

#### *Work Routing and Blending*

Any customer-centric process requires staff to do various items of work, and ciboodle provides the background framework to ensure that work items are passed directly to the right agents with the correct skills to process. It also actively manages the individual tasks to existing Service Level Agreements and promises made to customers. Escalations occur automatically and managers can trace work as it moves through the organisation. Work can be assigned by team, individual, and skill. The solution is not a comprehensive workforce management system but can integrate to these if necessary.

### *Case Handling*

Within ciboodle a case can be regarded as a flow of activities, such as a mortgage or loan application, which is made up of a number of steps. A case instructs the right people to work on specified tasks, and helps to ensure that the case has the correct outcome within the pre-defined cost and time parameters. Cases package together contacts and tasks, and contain rules governing completion. Where necessary, experienced users can create their own case types for circumstances that crop up, making this suitable for more non-standard uses as well. The tools available within ciboodle allow users to administer and manage cases, as well as split and route cases based on business rules, such as case category, customer type, required skills or service level. If a contact has an association with a case, it is possible to drill through from the contact to the relevant case.

### *Executive Dashboard and Operational Reporting*

An area that is often overlooked in packaged applications, ciboodle includes comprehensive operational reporting, providing a consolidated and up to date view of customer and agent interactions. This can include both current and historical data, as well as configurable alerts and action thresholds. The standard way to access this operational data is via an executive dashboard.

A typical dashboard would include a range of standard information such as cases completed, channels used, which agents have been active, service levels, and so on. Summary-level information on Contact Centre performance can be drilled down into individual agent, and customer-level information. In addition, it is possible to drill down into detailed information in order to proactively evaluate performance. Summarised statistics like average handle time and first call-resolution are easily derived. Alerts can be easily set (for example, on a particular case type or customer) so that managers can be notified rapidly of any significant issues. Thresholds for alerts and actions can all be configured.

### *agent247 (Natural Language Processing)*

The agent247 offering is an intelligent agent that, when applied to existing customer facing processes, provides a user interface (on all channels) that is based on natural dialogue. It uses sophisticated grammar constraints to assist customers either before a human agent is needed, or even instead of one.

Scalability of ciboodle is excellent, again coming from the underlying GT-X technology, which has been built with volumes in mind; one customer has up to 6,000 concurrent users, and the solution has been tested with 7,000 concurrent users.

## **Product Emphasis**

Graham Technology has been providing contact centre solutions for a number of years, helping its customers to configure the underlying GT-X BPM technology. This emphasis has made ciboodle a natural progression; by bundling relevant user-facing screens and processes that relate to customer service and sales interactions, it significantly reduces the amount of resource needed to implement such systems.

## DEPLOYMENT

ciboodle can be deployed on a wide range of platforms including Sun Solaris (8,9, and 10); IBM-AIX 5.1 and 5.2 (on POWER); Microsoft Windows 2000, XP, and 2003; Linux (for Intel), and HP-UX 11i (on PA-RISC).

An additional platform requirement is an application server (which should be J2EE-compliant and support an EJB container). The JBoss application server is provided with ciboodle, and Sun JES Application Server, IBM WebSphere, and BEA WebLogic are all supported. Database access is provided through JDBC and has been tested against Oracle 8i, 9i, and 10g, Informix, DB2 v7.2 onwards, Microsoft SQL Server 2000, MySQL, and IBM UDB.

A typical ciboodle implementation would require input from the customer's business analyst (or however described), Graham Technology experts, and third-party SIs or the customer's own technical staff. Limited J2EE skills may be needed, as well as integration knowledge – most of the tools use graphical modelling. The company aims to ensure that the relevant technical skills are transferred so that future projects can be handled internally or by the local partner. Ongoing management of the product requires an administrator role, but this is more of a business role than a technical one.

Project implementation will vary depending on the complexity of the project and the number of existing applications that need to be integrated (for example, with a back-office or other CRM application). Typical deployment times are in the region of three months.

Graham Technology offers its own professional services to support customer deployments, and has its own internal GT Academy that develops its staff, customers, and partners on an ongoing basis, and it provides formal accreditation.

The company provides core training for the product in a workshop/classroom environment. This training is practical in nature and includes the building of a ciboodle solution. Additional training can also be provided for key personnel; including technical architects, business analysts, and end users.

Customer support for ciboodle is available via Web, e-mail, and help desk, and is included as part of the maintenance and support package. Graham Technology also provides an Extranet portal containing Frequently Asked Questions (FAQs), White Papers, and downloads for communication with its support team.

Understandably for a product that manages customer interactions, an organisation would normally need to have a telephony switch or CTI solution in place already to take advantage of telephony integration, as well as e-mail gateways etc. The agent247 component of ciboodle has been tested against a variety of IVR platforms. It supports any VoiceXML and SRGS-compatible Speech Recognition package, for example, Nuance/Scansoft's Open Speech Recogniser.

ciboodle can integrate with a range of other technologies including COM/Corba, MQ Series, and supports a Service Oriented Architecture approach. It is also certified with a number of relevant third-party applications including SAP, Qliktech, Microsoft Exchange, and Unica. Integration with SAP Netweaver is bi-directional, and it is possible to use both SAP BAPIs and business exchange connectors.

Scripting is supported within ciboodle, and in terms of process modelling and design, both UML and BPMN are supported, but not the full BPEL syntax.

Graham Technology recommends that one GT-X7 instance (which underpins the ciboodle product) should be running in one Java Virtual Machine (JVM) for every 50 users.

## PRODUCT STRATEGY

As a contact centre and customer interaction management solution, ciboodle is suitable for a wide range of organisations, and Graham Technology markets it across a number of vertical markets. Utilities and financial services tend to be the markets where this type of offering is most commonly used, but it is suitable for many different organisations.

The company aims to sell ciboodle directly to customers, but also via partners, particularly in regions where it has limited presence itself.

Graham Technology has a number of technology partners that its products either use or integrate with, including Unica, SAP, Sun, iLog, Autonomy, Cisco, Avaya, Nice, Nortel, Nuance, Genesys, Yasu, IBM, QAS, HP, and Concerto. For implementation of its technology, as well as its own professional services organisations, it works with major Systems Integrators including PA Consulting, Dimension Data, Accenture, and LogicaCMG.

The company offers ciboodle via a flexible range of options including traditional licensed software (priced per user) and on a rental basis. This allows an organisation to start using ciboodle for one project and then expand the number of users over time. Licence costs (per concurrent user) are in the region of UK£1,500 to UK£2,000 per licensed user. The likely cost of a ciboodle deployment will vary depending on the scope and scale of the project, and to date has been between UK£100,000 and UK£4million, including professional services.

ciboodle is a relatively new product, and its future development will depend in part on enhancements to the underlying BPM platform, and will also depend on user request over time. Future plans include adding more sophisticated routing to support larger and more complicated call centre organisations.

Many vendors compete in the crowded CRM market, although few have such a flexible capability as Graham Technology. The main competitors to ciboodle are Pegasystems and Chordiant, although both these vendors have a rather different focus. Other CRM vendors tend to have a strong focus on sales force automation and significantly less on interaction management.

Graham Technology's objective is to focus in on helping its customers to improve their customers' experience by focusing on process. Given its strong track record in this area, it is highly likely to succeed with this goal.

## COMPANY PROFILE

Graham Technology is a privately-owned company, originally founded in 1986 by Iain Graham, who is still the company's CEO. The company initially operated as a Systems Integrator in the Scottish SME market, but became a software vendor when its GT-X solution for BPM was first released in 1993, with its first deployment in the following year. The company's latest offering, ciboodle, has evolved, offering this BPM technology with a strong CRM emphasis. ciboodle was launched during 2006.

The company has headquarters near Glasgow in Scotland, and also has major offices in Australia, Ireland, Indonesia, and South Africa. In total, Graham Technology has contacts across the globe. The company employs some 250 staff worldwide.

Although ciboodle itself is a new product, it is based on technology that is already in use in many customer sites, including Allied Irish Bank, BT, Egg, JP Morgan Chase, Pacificorp, Scottish Power, Standard Bank, Telecom New Zealand, and Telkomsel. There are currently four customers live on the ciboodle product itself, with a further five working through proof of concept projects. In total, Graham Technology has over 200 customers.

A number of Graham Technology customers have won awards for projects based on the company's technology, including North American customer service awards, 90-day Contact Centre CRM implementations, and the most geographically-spread Contact Centre in the world.

**SUMMARY**

Graham Technology has been focused on call centres and CRM as a business area with its GT-X product. This focus is deliberate and works with the company's competencies. With highly referenceable customers and a solution that can allow a process to be conducted across multiple channels, the company is well-placed to take a significant share of the market, as organisations look to upgrade older systems in order to improve customer satisfaction.

<b>Table 1: Contact Details</b>	
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