Request for Information (RFI)
On
IP Call Centers

RSVP Deadline: E-mailed or postmarked by **March 1, 2005** 5 p.m. (EST)
RFI Deadline: Emailed or postmarked by **March 18**, **2005** 5 p.m. (EST)
Publication Date*: June 9, 2005*

I. Introduction

Network Computing's **June 9, 2005** cover package will be devoted to IP Call Centers. Why should an enterprise implement an IP call center, and what is the best path to upgrade from a call center using a traditional TDM (Time Division Multiplexing)-based PBX? The RFI is based on a fictitious enterprise in the consumer electronics industry with 250 call agents in sales and technical support.

If you would like to participate, please RSVP to the author, Michael J. DeMaria (mdemaria@nwc.com) by **March 1, 2005** and **return the completed RFI** to Michael **by March 18, 2005.**

A. Purpose

This Request for Information is proprietary to Network Computing and CMP Media, LLC. It is drafted and disseminated for the sole purpose of generating information on call center products for publication in Network Computing on June 9, 2005. Participating vendors must meet the minimum requirements for participation described in Section B and agree that any information returned to Network Computing in response to this RFI will be published in print and electronic form on our Web site, www.networkcomputing.com.

Please note that we reserve the right to examine a test unit in our Syracuse University Lab or at a customer site for any product submitted for review.

B. Instructions

The following minimum product requirements are necessary to participate in this review of **Call Center** applications. Please check all that apply.

___ Product is available to customers on or after March 18, 2005 and is not in beta form
___ Support for both TDM (circuit) and IP (packet) switched voice networks
___ Multimedia routing for voice, e-mail, Web, and facsimile communications
___ Call blending: support inbound and outbound calling
___ Look-ahead routing logic (interrogate queues and estimate call-wait time)

___ Priority queuing
___ Queue escalation
___ Skills-based routing

If you do not meet all of these criteria, your product does not meet the minimum qualifications for this review. Please notify Michael J. DeMaria (mdemaria@nwc.com or 315-443-5798) by March 1, 2005 that you do not meet the criteria for participation. Thank you for your consideration.

If you respond to the RFI, please note the dates in Section C to complete the RFI on time for inclusion in our June 9, 2005 issue. We suggest you read through the entire RFI before answering questions. You can reference answers to other questions in the RFI using the section and question number. Please do not reference materials outside the RFI; incorporate them into your answers. This RFI will be the **only** source used to review your product.

Some questions provide for Yes/No checkbox answers, while some require more detail using an essay format. **Essay-type questions include word-count limits. Any responses submitted beyond the limit may be disqualified**.

Please answer all questions--this information is the foundation on which we determine the winning bid and our Editor's Choice Award. If you do not have an answer for a question or it does not apply, please indicate that in the space allotted. If you leave a question blank, we can only assume that your product does not support the proposition or that it does not provide an answer to the question.

C. Effective Dates

RFI Issue Date: February 25, 2005
RSVP Deadline: March 1, 2005 by e-mail to mdemaria@nw.com by 5 p.m. (EST),
RFI Deadline: March 18, 2005 postmarked or emailed by 5 p.m. (EST)
Publication Date: June 9, 2005

II. Business Overview

Kodiak Corporation is a global manufacturer of thermal management solutions for computers. It produces fans, heat sinks, and temperature sensors for PC manufacturers worldwide. It also produces CoolIT, a line of water-cooled workstations and mid-range computers. Kodiak aims to put its thermal technology in every PC on the planet and expand the CoolIT line from its niche market in computer gaming and engineering to enterprise desktops and data centers.

Customers contact Kodiak today using phone, fax, e-mail, and the Web. Each of these methods is independent of the others. The Kodiak Board of Directors has identified this as a problem and a road block to global domination in thermal management. It aims to resolve the problem by establishing an IP Call Center capable of routing multimedia (voice, e-mail, fax, and Web) communications to the call center over IP. However, it is not ready to forklift out its current phone system for a VoIP system and thus lose its investment in its legacy TDM (Time Division Multiplexing)-based PBX.

Kodiak's manufacturing, testing, and support facilities are located in Death Valley, California. Customer sales and service outlets are in Los Angeles and San Francisco. Presently, calls come into both the Los Angeles and San Francisco offices and get routed to sales and service specialists in those facilities. All support calls are blind forwards to Death Valley.

PSTN trunks with ANI (Automatic Number Identification) services connect to TDM-based PBXes in Los Angeles and San Francisco. The PBXes are connected via ISDN lines. Automatic Call Distributors (ACDs) and Integrated Voice Response (IVR) systems in both locations provide front-

end voice processing and switching as well as a self-service customer response system. In addition, the redundant systems act as a hot back-up in case one fails.

Calls are routed based on the menu selection for the particular service desired or employee extension and the calling number. A local number receives a lower priority than a long-distance number to reduce the calling party's cost of inquiry.

Kodiak's current system employs *call-back messaging*. This enables customers to register their number with the system to receive a call back if the wait-time is extensive. For the call back, Kodiak uses *call blending* to serve both incoming and outgoing agent calls through a predictive dialer. The system monitors the status of incoming calls and the availability of agents and allows outgoing calls only when it determines that an agent is free and that an outbound call will not adversely affect incoming calls.

Support calls are routed from Los Angeles and San Francisco to Death Valley back over the PSTN. Over the past year, the Death Valley office has piloted a number of VoIP initiatives to take advantage of data trunks (T-1) running between each of the offices. But no decision has been made at this time. A detailed RFP for a VoIP system in Death Valley is in progress and implementation is projected for Q4 2005. But Kodiak has no information on the projected implementation in this RFI.

Each of the call centers in Los Angeles and San Francisco support approximately 100 agents (total = 200). During peak sales periods (November-December), Kodiak adds 50 seasonal agents to each location (total = 300). This is a heavy burden on the physical plant but necessary to handle seasonal call volume. Kodiak would look forward to setting up agents outside of the enterprise in home offices or scope out a partner to outsource seasonal contact center agents (segue to an outsource sidebar).

III. Kodiak Business Essentials

A. Employees: 1,500
B. Call agents, regular, FTE (Full-Time Equivalent) employees: 200
C. Call agents, irregular, seasonal employees: 100
D. Number of agents working remotely: 0 now, but desire 100 post implementation.
Existing network infrastructure: The data network at each site sports a Gigabit backbone with 100 Mbps connections to desktops. IEEE 802.3af (Power over Ethernet) is available on desktops and QoS strategies include IEEE 802p/q (Managed Objects) and support for either DiffServ (Differentiated Services) or ToS (Type of Service). All corporate data are contained in Active Directory, file stores, and MS-SQL and Exchange databases that are replicated across each site. Web and e-commerce sites are centralized in San Francisco. Fax servers are located in all three locations. With these facts, assume that the network is more than adequate to support VoIP applications.

IV. Kodiak Goals

A. Improve call center operations
B. Provide excellent customer service
C. Reduce telecommunication costs

V. Kodiak Business Objectives

A. Invest in a new call center platform that integrates with the current (legacy) platform, enabling Kodiak to maintain its investment in a TDM-based system while providing a smooth migration path to a VoIP infrastructure.
B. Use multimedia routing to send all inquiries to call center agents, whether they come in by voice, fax, e-mail, or Web,.

C. Decrease costs by supporting voice and data on a single network
D. Eliminate toll charges between sites
E. Reduce infrastructure costs by enabling agents to work remotely

VI. Review Criteria

The proposed solutions will be graded on the following criteria:

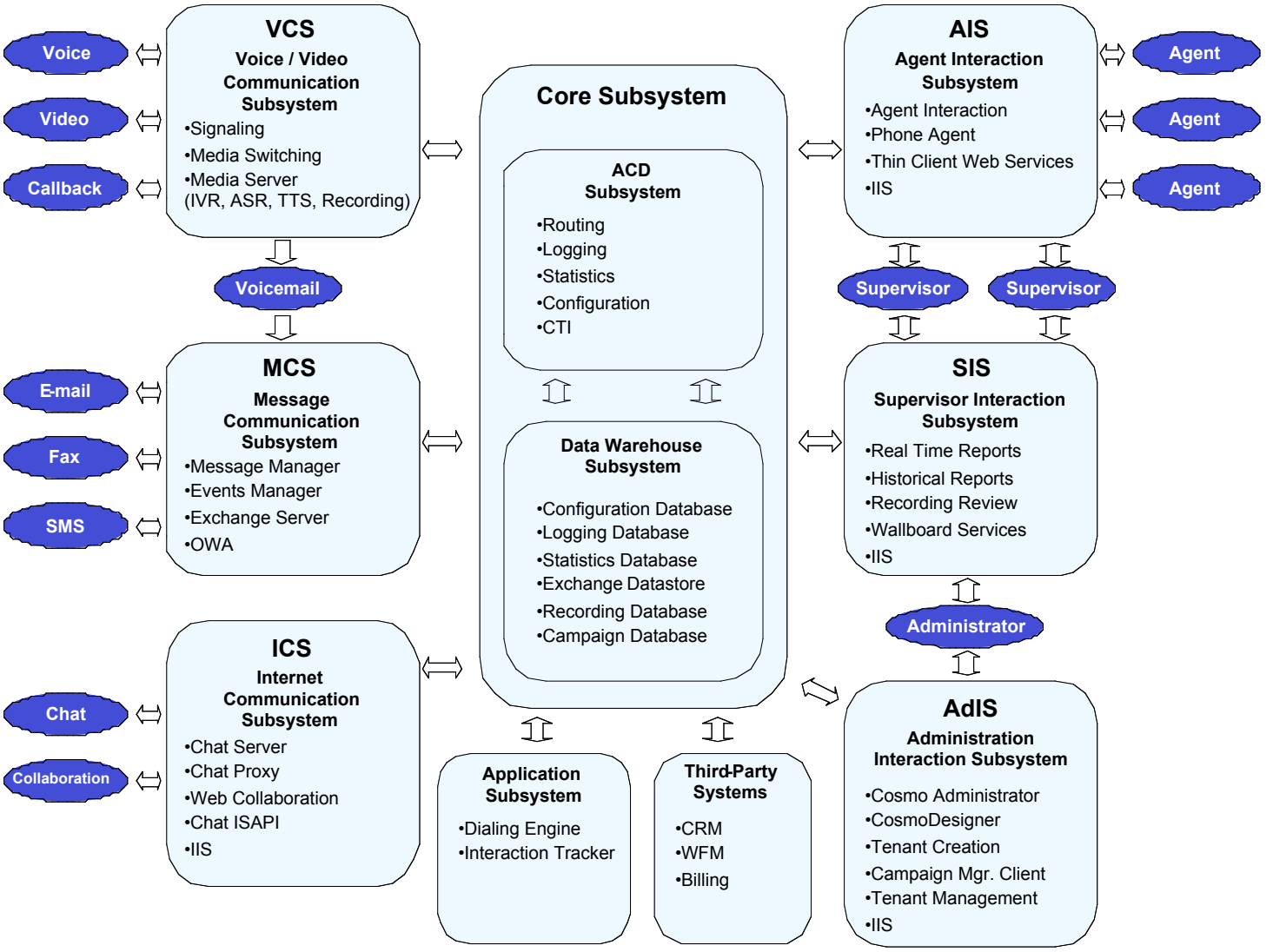
A. General Architecture

1. Provide a diagram of major hardware and software components and how they are interrelated and interconnected.

The CosmoCall Universe all-IP, unified access contact center suite is a pure software solution that is comprised of multiple functional components, all of which were built from the ground up by CosmoCom to work seamlessly together. Designed to satisfy the requirements of the largest, multi-tenant carrier deployments as well as those of large and small enterprises, CosmoCall Universe offers both Service Provider and Enterprise editions of the application.

CosmoCall Universe is implemented on industry standard computing elements, based on IP communication and open, standards-based interfaces. An advanced inter-process communication mechanism enables the product's distributed architecture, supporting any conceivable topology of processes and computing elements, from the smallest one-box solution to the largest multi-element and multi-location arrangements.

CosmoCall Universe is based on an architecture composed of multiple subsystems, as detailed below. As shown in the diagram, each subsystem contains a number of services.



Subsystems, Services, and Servers

The architecture diagram is a logical representation of the system components, and not a physical representation of servers required to implement the system. All of the subsystems and their respective services can be implemented on a single physical server. Alternatively, the subsystems and services can be divided among many physical servers to meet the capacity, reliability, and network topology requirements of the situation.

For the largest systems that demand the most in the way of scalability and availability, each subsystem is arranged in either an n+1 or duplicated configuration, depending on the subsystem. For further scalability and performance within each subsystem, the individual services can be further segregated onto different servers. This multi-subsystem, multi-service, multi-server approach allows for theoretically limitless scaling.

For medium sized systems, each subsystem can still be arranged in an n+1 or duplicated configuration to provide scalability and availability, though all services of a particular subsystem may run on an individual server to save cost and complexity.

Even for small systems, subsystems can be arranged with n+1 and duplication. However, multiple subsystems can run on an individual server. The smallest redundant configuration would use just two servers. All subsystems and services would run on each server, and should either server fail, the other can provide full service. In the most cost-sensitive situations, all of CosmoCall Universe's subsystems and servers can run efficiently on a single server.

Subsystem Descriptions

This section provides a description of the each subsystem and of how it interacts with the other subsystems.

Communication Subsystems

Three Communication Subsystems make up the outward facing elements of CosmoCall Universe. These three subsystems differ mainly in their external interfaces. Their internal interfaces with the other subsystems of the platform are all very similar in function. There is a different Communication System for each major type of communication object supported by the platform.

*The **Voice / Video Communication Subsystem (VCS)** presents SIP and H.323 as its external interfaces, and manages inbound and outbound voice and video. IVR, automatic speech recognition (ASR), text-to-speech (TTS), and recording functions also reside in this subsystem. The VCS enables contact centers to connect to the PSTN via any standard media gateway or to connect directly into any VoIP network. After a call has undergone IVR treatment, which may optionally include ASR and TTS, and has been determined to require routing to an agent, the VCS submits relevant details for the call to the ACD subsystem's universal queue. These relevant details may include information about required skills, data collected from the IVR, information queried from the interaction history module, and/or information derived from an external application such as CRM, which could indicate the value of the customer, e.g., a platinum-level customer. In the case of a predictively dialed, outbound call, the VCS can perform answering machine detection and then communicate with the ACD for immediate routing to an available, appropriate agent.*

*The **Message Communication Subsystem (MCS)** presents SMTP as its external interface and processes email, fax, SMS, and voice mail interactions, which all arrive in SMTP format. The MCS conducts initial processing of the messages, and can generate automatic receipts or automatic replies. If the message requires routing to an agent, the MCS submits relevant details to the ACD subsystem's universal queue. Similar to the way voice calls are handled by the VCS, these details may include information about required skills, information obtained during pre-processing of the message, as well as the value of the customer, which may have been obtained via an external database dip. If integrated with an external knowledge base, when the message is delivered to an agent, it may already contain suggested responses based on previously defined processing rules.*

*The **Internet Communication Subsystem (ICS)** presents HTTP as its external interface, and supports web chat and collaboration activities. When an incoming chat arrives, the ICS communicates with the ACD subsystem's universal queue, which will determine when to route the chat and to which agent. Similar to the VCS and MCS, initial processing of the chat may determine the skills required and may also include an external database dip to determine the value of the customer. Once in a chat call with a customer, the agent may then invoke collaboration activities, as well as escalate the web chat to include web voice and/or video. Agents on standard voice calls may also invoke meet-me collaboration sessions.*

Core Subsystems

*CosmoCall Universe **Core Subsystems** are comprised of the **ACD Subsystem** and the **Data Warehouse Subsystem.***

*The **ACD Subsystem** provides the universal queuing and routing mechanism, receiving and processing requests from all Communication Subsystems – VCS, MCS, and ICS – in a unified way. Calls and messages are routed to agents based on the defined rules including queues and skills routing with skill weighting, priority routing based on target quality of service (QoS), and routing by contact type and customer value.*

In addition to universal queuing and routing, the ACD Subsystem is also responsible for logging, statistics, configuration, and CTI functions. The logging function consolidates events from all of the other subsystems and writes them to the logging database, which in turn is used by the historical reports function to serve up reports as necessary. The statistics process maintains constant communication with all subsystems, especially the agent interaction subsystem, to keep track in real time of the status of all system components, agents, calls, and messages. This process is used by a number of other system processes, but especially by the real time reports process, which provides the most up-to-the-minute agent and system information to supervisors and administrators. The configuration services process keeps track of system and agent configuration data, and is used by a number of other system processes, but especially by the administrator interaction subsystem. Finally, the CTI process is used to achieve back-end, third party, call control-based integration with a variety of external applications.

*The **Data Warehouse Subsystem** stores all configuration and logging information. It also houses the message datastore, as well as databases for interaction history, outbound campaigns, and recording.*

*As shown in the diagram, most **Third Party Applications** such as CRM, WFM, and billing interact with various components of the **Core Subsystems**.*

Other Subsystems

*The Outbound Dialing and Interaction Tracker applications reside in the **Application Subsystem**. The Outbound Dialing application includes predictive dialing, progressive dialing, preview dialing, and IVR dialing functions, along with the associated campaign management capability. The interaction tracker application keeps a record of all inbound and outbound call activity for all media types, and presents the agent with relevant screen pops and other convenience features, such as single click outdial to customer numbers.*

*The **Agent Interaction Subsystem** manages communication sessions with agents. This subsystem includes Thin Client Web Services to support the browser-based version of the agent interface. The phone agent process enables agents that have phones only, without PCs, to receive and originate telephone calls.*

*The **Supervisor Interaction Subsystem** provides the processes that serve up real time and historical reports, wallboard capabilities, as well as the recording review and supervisory monitoring interfaces.*

*Various administration interfaces, including core administration activities, IVR and call flow design, and campaign management, are handled by the **Administration Interaction Subsystem**. In a hosted scenario, this subsystem also contains tenant creation and management functions for Service Providers and Sub-Landlords.*

2. Provide the business case for your solution based on Kodiak's goals, objectives, and business environment. You are free to include a competitive analysis. Please limit your answer to 500 words or fewer.

CosmoCom's solution provides a complete solution to Kodiak's current needs, and a graceful evolution path to a pure IP architecture. Initially, Kodiak will preserve the circuit switches and deliver all telephone calls via those switches. Each agent will run CosmoAgent software on their desktop, which will provide call control and screen pop integration for all channels. A single CosmoCall Universe system will control the queuing and routing for all of Kodiak's calls at all locations, including voice, chat, e-mail, and fax, as well as provide for unified administration and reporting across all of these channels and locations.

The three Kodiak sites will be networked together using the existing IP network, thereby reducing telecommunications costs. Agents can do blind or announced transfers from any agent at any site to any agent at another site, or to a teleworker, all over the IP network. In addition, any supervisor at any site (or teleworking) can monitor any agent on the system.

A single CosmoCall Universe system composed of a collection of servers will be deployed across multiple Kodiak sites. Each system component will be deployed in an N+1 or duplicated configuration, so that a server failure will have no impact on the overall call handling capabilities of the system, and a total site failure will allow the other sites to continue operations without interruption – thereby providing carrier-class reliability in a highly economical deployment.

All of Kodiak's specialized routing rules can be preserved in the CosmoCom system, including service-based routing, extension dialing, and prioritization based on local vs. long distance or any other prioritization rules. Callback messaging will be fully integrated into the universal queue, so that outbounds calls are only initiated when they will not adversely affect incoming calls.

During peak periods, Kodiak can add teleworkers on demand to handle the additional load. Teleworkers are treated just like any other agent in the CosmoCom system. They can use VoIP and their multi-media PC to handle all calls purely over their home IP connection, or the voice traffic can be delivered over the public telephone network to their home phone or cell phone. In either case, the teleworkers will use the same CosmoAgent software with the same capabilities that they use in the office. Since there is no special equipment to install, agents can be activated totally on-demand. Kodiak can even teleservices outsourcers, whose agents can log in directly to the Kodiak system, enabling them to me monitored and reported on as if they were Kodiak employees.

At Kodiak's discretion, they can migrate from circuit-delivery of phone calls to VoIP-delivery of phone calls at their own pace – even on an agent-by-agent basis - providing for a very graceful migration.

B. Routing
(business rules used to process and prioritize call center transactions)

1. Describe the business rules available to Kodiak to route multimedia messages to contact center agents. Limit your answer to 500 words.

Agents are organized into agent groups with customer-defined, many-to-many relationships between queues and groups. In addition to these basic building blocks of queues and agent groups, the ACD supports skills-based routing with skill weighting, priority routing, Most Idle Agent, and routing by contact type and customer value. Routing rules can be determined based on nearly any piece of data, such as: Data associated with the call: DNIS, ANI, caller-entered digits, e-mail address, e-mail subject or contents, web page from which a chat call originated, caller information entered on web site prior to initiating chat, etc. In addition, the system can

easily query an external database to determine routing rules (e.g. give preference to a high-value customer).

For every call that is handled by the CosmoCall Universe platform, there is a series of events that are generated throughout the life of the call. A few examples include the Call Arrival, Call Termination, Call Rejected (when there are no agents logged in with the call requirements), Music On Hold, etc. These events are all associated with scripts that determine the call flow and assign the information that is passed along with the call. This event driven system allows a lot of flexibility to dynamically determine the call treatment as it progresses through the queue.

Scripts for each event are created using a simple drag-and-drop graphical Service Creation Environment, called CosmoDesigner. In addition, users can add custom logic to the scripts, or access an external program and return to the script after execution is complete.

CosmoCall Universe features a robust service creation environment that enables the rapid design of call treatments and routing logic. In addition to its extremely flexible collection of forms-based tools to define routing rules, the system features scripting tools that enable users to create virtually any conceivable set of routing rules, no matter how unusual.

2. Are there any differences between routing customer contacts over e-mail, fax, telephone, and the Web? In other words, do business rules (routing) apply to all multimedia contacts equally? If yes, please explain in 300 words or fewer.

CosmoCall Universe's ACD provides one point of queuing and routing for all contact types, including telephone, email, voice mail, fax, web chat, web voice, web video, and web collaboration. All of these contact types are seamlessly blended into a single queuing and routing intelligence (the "UQ"), and all can follow the same call flow and routing rules. In addition, all contact types are tracked and managed through one database and one set of reports.

3. Can Kodiak share the same business rules across all sites?

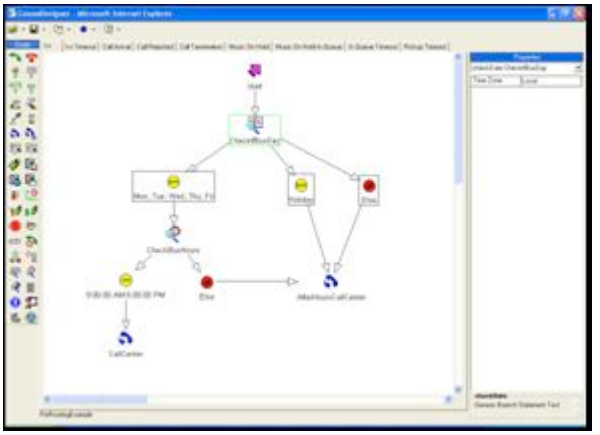
Yes. All business rules automatically apply to all agents, regardless of location. If Kodiak wishes to take agent location into account in the routing logic, they can do so.

4. Describe the difficulty and the tools necessary to make routing changes on a production system. Use 300 words or fewer.

All administration is accomplished via intuitive, browser-based graphical user interfaces. All administrative changes take effect in real-time, and are automatically distributed to all impacted components at all sites. The CosmoDesigner tool is used for call flow generation and service creation. It is a drag-and-drop tool, which makes it easy for users to design call flows and IVR applications with no programming. CosmoDesigner has a few main classes of capabilities:

- *Media: Play Announcements, Play Date, Collect Digits, Record Messages, etc.*
- *General Logic: Menus, Conditional branch, switch, check time/date, etc.*
- *ACD Logic: Set and Adjust Queue, Skills, Priority, etc. at any point in call*
- *Call Control Logic: Answer, Transfer, Hang-up, etc.*
- *External logic: Read/write data from remote database and access external routing logic*

CosmoDesigner generates XML data that can be published to an internal or external web server. Databases can be stored as XML tables, and accessed easily and conveniently using standard CosmoDesigner tools.



5. Are carrier-based pre-call routing options necessary to implement your solution? If so, please detail the routing required by carriers and which carriers are certified for your product. Limit your answer to 250 words.

There is no need to use carrier-based pre-routing to balance the call workload across the different sites or agent groups. All workload balancing is accomplished automatically by the CosmoCall Universe ACD, which can treat all agents as if they are at a single location for routing purposes. To efficiently distribute incoming calls across the inbound ***telecommunications*** *lines at SF and LA sites, Kodiak may choose to use simple pre-routing from their existing carriers, such as Percentage Allocation.*

6. When real-time response is indicted by voice and Web contacts, describe the system's ability to inform customers of their positions in the queue and the time remaining before a response? Limit your answer to 250 words.

Queue position and expected wait time are available for all calls. Since the system supports a unified queue for all contact types, the same values apply for all types of media. These values are available via the CosmoDesigner IVR and call flow tool described in #4, so they can easily be used to indicate wait times to the callers, to set initial routing rules, or to update routing rules after a call has been waiting in queue for a period of time.

C. Queuing
(prioritization of routed contacts)

1. Can the system check the status of a queue prior to routing? Y/N *Yes.*

3. Can the system reroute contacts for changed circumstances, such as queue availability? Y/N *Yes.*

4. Can agents be interrupted from a current task to handle high-priority contacts? Y/N *Yes.*

5. Can contacts select an IVR self-service module and return to their place in the queue to talk with a Kodiak customer service, sales, or support agent? Y/N *Yes.*

D. Enterprise Integration

1. List the TDM-based PBX switches you support by vendor and model.
2.

Since CosmoCom supports a wide variety of industry-standard VoIP gateways, the system can interface with any TDM-based switch, via standard TDM trunk connections,

2. List the IP PBX switches you support by vendor and model.

Alcatel	*OmniPCX 4400*
Avaya	*Definity*
Cisco	*Call Manager*
Nortel	*Meridian ITG*
Pingtel	*SIPXchange*

3. List the ACD (Automatic Call Distribution) systems supported by vendor and model.

Since CosmoCom supports a wide variety of industry-standard VoIP gateways, the system can interface with any TDM-based switch, via standard TDM trunk connections,

4. List the IVR (Integrated Voice Response) systems supported by vendor and model.

Since CosmoCom supports a wide variety of industry-standard VoIP gateways, the system can interface with any TDM-based IVR via standard TDM trunk connections.

5. If you supply your own IP PBX, what features are supported? Check all that apply.

_X_Authorization codes
___Automatic callback
_X_Add-on conference
___Call waiting
___Paging
_X_Hoteling
_X_Automatic camp-on
_X_Automatic alternate routing
___Trunk callback queuing
_X_Uniform dial plan
___Night service
_X_E911 Support
_X_Class of service
_X_Class of restriction
___Intercom groups
___Group paging
___Directed call pickup
___Group call pickup
_X_Distinctive ring

6. List the VoIP gateways that you support by vendor and model. Include the signaling protocol supported with each model (e.g., H.323, SIP).

Gateway Vendor	Model(s)	Protocol Certified (or in production)
Alcatel	*7505 Media GW*	*H.323*
AudioCodes	*Mediant 2000* *Mediant 2001*	*H323 and SIP*
Boscom	*BV2001*	*H323 Only*

Bosanova	*VoIP Gateway*	*H.323*
Bridgetech	*BT CLi – 4000c*	*H.323 and SIP*
Broadsoft	*VoIP Network*	*SIP*
Cirpack G16S	*G16S*	*SIP only.*
Cisco	*2600* *3600* *3640* *3650* *3660* *3745*	*H.323 and SIP*
Cisco	*VG 200*	*H.323 and SIP*
Cisco	*AS 5300* *5350*	*H.323 and SIP*
Clarent	*Gateway 100* *Gateway 400*	*H323 Only*
Innovaphone	*IP400* *IP800* *IP3000* *IP6000*	*H.323*
IPNX	*VoIP Gateway*	*SIP*
Level 3	*SIP Network*	*SIP*
Nuera	*GX-21 Gateway*	*H.323*
Sonus	*GSX9000 Media GW*	*H.323 and SIP*
Veraz I-Gate	*4000 Media GW*	*H.323*
VocalTec	*Gateway 480*	*H323 Only*
VocalTec	*Gateway 2000*	*H.323 Only*

7. If you manufacture and sell your own VoIP gateway, provide the business case for it in light of Kodiak's goals and objectives in 300 words or fewer.

CosmoCom does not manufacture its own gateways. We only use industry-standard VoIP gateways.

8. Does your solution certify or support integration with major messaging and/or collaboration packages? If yes, please select all the packages that apply.

___ No (answer question 10)
_X_ Yes, the following packages are supported:
_X__IBM Domino/Notes
_X_MS-Exchange/Outlook
_X__Novell Groupwise
_X__Other (Please specify) - *Any mail system with an SMTP interface. The internal CosmoCom mail system is based on MS Exchange.*

9. **If you answered "No" to Question 8**, what options are available to integrate an enterprise messaging and/or collaboration tool with the contact center? **Limit your answer to 300 words.**

10. Does your solution certify or support integration with fax server packages? If so, please select all the packages that apply.

___ No (answer question 11)
_X_ Yes, the following packages are supported:
_X__ Biscom
_X__ Captaris RightFax
_X__ Castelle

_X__CopiaFacts International
_X__ Esker Fax
_X__ Faxback
_X__ Faxcore
_X__GFI Fax
_X__ Interstar
_X__ Omtool
_X__ Softlinx
_X__ Other (Please specify) - *Any fax server that can turn a fax into an e-mail with an attachment.*

11. If you answered **"No" to question 10,** what options are available to integrate an enterprise fax service with the contact center. **Limit your answer to 300 words.**

12. Does your solution certify or support integration with Web servers? If so, please select all the servers that apply.

___ No
_X__ Yes. The following servers are supported:
_X__ Apache
_X__ MS-Internet Information Services
_X__ Sun Java Enterprise System
_X__ Zeus
_X__ Other (Please specify) – *Web integration can be done with any web application on any web server infrastructure. Integrations can be done using a number of commonly supported programmatic interfaces, such as XML, Javascript, ASP and .NET. The CosmoCom internal web services are generally deployed on MS-IIS.*

13. If you answered **"No" to question 12,** what options are available to integrate Web servers with the contact center? **Limit your answer to 300 words.**

14. Is there a separate code base and/or point of administration for the support of outbound calls to satisfy the "blended calling" requirement? Or is it fully integrated with the system?

The outbound calling capability is fully integrated into the CCU system.

15. What operating system software is supported? Check all that apply.

___ Linux
_X_ MS-Windows
___ UNIX (this includes AIX, BSD, HP-UX, Solaris, etc.)
___ Other (Please specify)

16. What relational (or other) database is supported? Check all that apply.

___ IBM DB2
___ MS-Access
_X_ MS-SQL
___ MySQL
___ Oracle
___ Postgres
___ Other (Please specify)

17. Is the database included with the call center or does the customer supply it? Check the appropriate response.

___ Included in the call center application
_X_ Supplied by the customer

18. Do you have connectors or established integration paths for back-end systems? Please check all that apply?

___ E.piphany
_X__ Oracle and Peoplesoft
___ SAP
___ Other (Please specify) – *Siebel, Onyx, MS CRM, Remedy, Salesforce.com*

19. What tools are used to administer the system? Check all that apply.

___ CLI (Command Line Interface)
___ GUI (Graphical User Interface) 32-bit binary application
___ GUI 64-bit binary application
_X__ Web-based administration
___ Other. (Please specify)

20. Do you supply a developer's tool kit with the call center?
___ No
_X_ Yes, gratis
___ Yes, at cost of: _____

E. Computer Telephony Integration (CTI)

1. Describe the call center's integration with voice and data to attach data to call events.

Every call entering the system has a call object created. This object automatically is populated with the basic information about a call (e.g. for a voice call, the ANI, DNIS, etc.). At any point in the life of the call (IVR, In Queuue, talking with agent, wrap-up, etc) additional information can be added to the call object, and information can be read from the call object. Typically, data is added to and read from the call object using the graphical call flow CosmoDesigner tool, making it very easy and intuitive. The CosmoDesigner tool can also integrate with external programs or external databases, and data obtained in this way can easily be added to the call object using the tool. Thus, any information in the call object can easily be used to determine routing, and to populate a screen pop. The call object data is also stored in the historical database for future reference.

The Call Object goes wherever the call goes. If the agent is using a softphone, the "ring" message to the agent desktop contains the call object, so it is impossible for the data and the voice to get separated. If the agent is using a hard phone (circuit or IP), then the ring message is sent simultaneously to the agent desktop (with the call object) and to the address of the hardphone registered for that desktop.

2. Describe how the call center application integrates with agent desktops for efficient customer account management. For example, does the CTI component have application programming interfaces (APIs) to applications, or will custom development be necessary? **Limit your answer to 300 words and include a graphic of the desktop if applicable.**

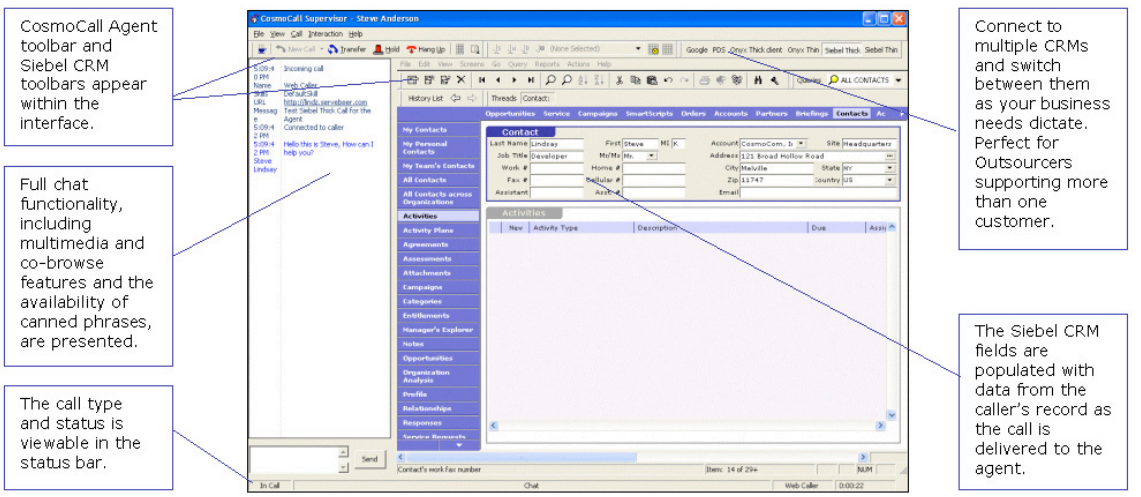
Agent desktop integration can be achieved quickly and inexpensively, often in hours rather than days, or in days rather than weeks or months associated with traditional CTI integrations.

There are three methods to display call information to the agent on the agent desktop:

1) *By default, core information in the Call Object (described above) is displayed to the agent on the same PC interface that they use for call control. The information displayed can be modified by manipulating a simple table that contains the call object attributes.*

2) *The system comes with a built-in CosmoTracker Interaction History. If enabled, this will provide a screen pop with the history of all prior interactions with the caller, regardless of the media (voice, e-mail, chat, fax, …). By default, the system will use the ANI to determine the screen pop. If there is more than one record that matches the ANI, the agent will presented with both records and can select the appropriate one. The record look-up rules can be changed to use any data in the call object by manipulating a simple table that contains the call object attributes.*

3) *CosmoConnector is an out-of-the-box integration enabler for packaging CosmoCall Universe and third party business applications, such as CRM and Help Desk. CosmoConnector presents itself as a single desktop application with a single, integrated window combining the functionality of the CosmoAgent with that of the third-party application(s). CosmoConnector can be used in combination with the CosmoCom-developed plug-ins to popular business applications. Additionally, customers and partners can use the CosmoConnector Software Development Kit (SDK) to develop integrations to applications that do not have a CosmoCom-developed plug-in, such as proprietary or home-grown applications. The screen pop can use any data in the call object by manipulating a simple table that contains the call object attributes.*



CosmoConnector example integration with Siebel CRM

3. List business applications that will integrate with your system, along with a brief summary.

Agent desktop integration can be achieved quickly and inexpensively, often in hours rather than days, or in days rather than weeks or months associated with traditional CTI integrations. Because of this, customers and partners do many of their own integrations. In addition, CosmoCom provides canned plug-ins for popular business applications, including Siebel, Onyx, MS CRM, Remedy, Microsoft Contact Center Framework, and Salesforce.com. Integrations

4. List software vendors not mentioned above, in question 3, with which you have established partnerships.

Blue Pumpkin, Fused Solutions, ISC, Broadsoft, Orbis.

5. Provide additional comments about the current or planned business value of support for third-party integration. **Limit response to 100 words.**

I think we covered the technical aspects already. CosmoCom's integration capabilities are quite unique in the industry, and customers LOVE it. We can provide many references of customers whohave created end to end IVR, call flow, and CRM screen pop integration in hours – even when the screen pops are with their own home-grown CRMs!

6. Describe how agents are alerted to incoming e-mail, fax, and Web messages on their desktops. For example, does a screen pop up, or does the agent have to toggle to another application to observe a queue? **Limit your answer to 250 words. You have the option to include a graphic of the desktop integration.**

All customer contacts (PSTN voice, VoIP, Chat, E-mail, Fax, Voicemail) are considered "calls" and are handled by the system in a unified manner. When a contact is routed to a particular agent, the agent is provided with a "ringing" indication on their workstation, along with all of the information about the call and a CRM screen pop. The agent answers the call via the desktop application, and the call is connected to the agent. The agent processes the call in the appropriate manner, and then hangs up the call. The agent is placed in "wrap-up" mode, where they can select the reason for any after call work required. When wrap-up is complete, the agent is made available again. A transcript (chat, e-mail) or recording (voice) of the interaction with the caller is stored.

7. Describe how Web interactions and real-time support for chat sessions get routed to agents in their different locations. Is the same routing routine applicable to all the Kodiak sites?

The web contact capability can be added to any web page. With one click of a button, a web surfer can submit a call to the CosmoCall Universe ACD with the appropriate queue, skills and priority. Any additional data from the web caller's session can also be passed along with the call so that the agent can view all of the information related to the caller's web interaction prior to answering the call. The caller interface is a pure HTML solution that does not require any download. The interface is built around standard, frames-based HTML technology, and the look and feel can be entirely customized. Both reactive chat and automated pro-active chat sessions are supported. Automated pro-active chat can be constructed by using standard web-site scripting capabilities to trigger call initiation, such as detecting how long someone is on a page, detecting when they've gone to a special page, etc.

Web calls are queued in the Unified Queue that services all media types and all agent locations. The routing rules will route the call to the most appropriate agent (based on availability, weighted skills, etc.) at any location. Once the agent answers the call, the agent can interact with the caller via live keyboard chat, agent-led browsing. Since the communication with the caller is pure HTML, the system works even within any firewall environment. Once connected, the agent can select from a number of canned phrases to respond to caller questions. The customer interaction can go beyond text chat to include joint browsing, Internet Voice, and even live Internet Video – one-way (typically agent to caller) or two-way.

8. What standards are supported for CTI? Check all that apply.

___ CSTA (Computer-Supported Telephony Application)
_X__ H.323
_X__ HTML
___ MVIP (Multi-Vendor Integration Protocol)
_X__ SIP (Session Initiation Protocol)
___ TAPI (Telephone Application Programming Interface)
___ TSAPI (Telephone Services API)
_X__ VoiceXML
_X__ XML
_X__ Other (Please specify) - *.NET, ASP, Jscript, Javascript, Perl, VBScript*

F. Telecommuting

Kodiak would like to give call center employees who live in the Bay area and in Los Angeles basin the option to telecommute from home via their broadband connections. The company wants to provide the flexibility for those in the call center to be able to work from home in a seamless

manner. There will also be 50 additional telecommuters hired on a seasonal basis. Provide details on what the telecommuting strategy will be for Kodiak after they implement the IP Contact Center.

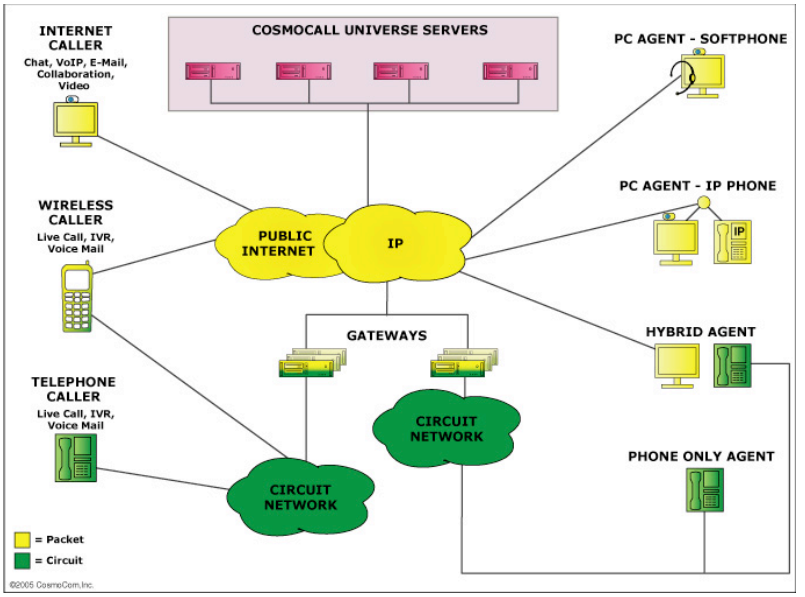
1. Provide name of telecommuting product:

CosmoCall Universe

2. Provide per employee price for telecommuting product:

$1500 - $3000, depending on capabilities

3. Provide a diagram of your proposed telecommuting solution.



4. Describe how you provide the telecommuter solution in a secure, functional environment. **Limit response to 150 words.**

Since all CosmoCall Universe agents are connected to the system using TCIP/IP, remote agents operate in a similar manner to non-remote agents, with identical functionality. Agents use their PC software to connect to the core CosmoCall Universe system, which is located in the corporate hosting center. The IP connection can be secured using any standard IP security method – most commonly a VPN. The voice communication can be transmitted over this same IP link directly to the agent's multi-media PC equipped with a headset. Alternatively, the voice can be delivered to an IP phone, or to any circuit phone number, while the agent still has full call control and screen pop capability via their PC. If the agent has no PC or IP connection at all, the agent and use the "phone-only" option and still participate in the unified queue of the CosmoCom system.

Any supervisor on the system can monitor any agent from any location, including telecommuting agents.

G. Scalability

Kodiak recognizes that there physical limitations to everything--even their heat sinks. Share the physical limits to your call center below. If a limit does not apply to your solution or business model, please state that and tell us why **in 50 words or less**.

1. What is the maximum number of call agent seats/licenses per active system?

The current version of CosmoCall Universe has a maximum capacity of 20,000 agents, which can be housed in three 42U cabinets with plenty of room to spare. Since the system is totally software based, this capacity rises as computing power evolves. In addition, CosmoCom continues to optimize the software design for scalability, with a design goal to support up to 120,000 agents in a single system image in an upcoming release, and further extensions in the future.

2. What is the maximum number of trunk groups and ports (or lines) that can be configured per system?

There is no limit on the number of trunk groups or ports. The system limitations are based on number of calls routed per hour (see below).

3. What is the maximum number of calls per hour per system that can be supported?

The current system capacity is 720,000 calls routed per hour. Additional calls can be queued.

4. What is the total number of routing rules that can be configured per system?

There is no limit. Routing rules are turned into XML files executed on a web server.

5. What is the maximum number of virtual agents (telecommuters) per system that are able to work from home?

Telecommuters are handled identically to all other agents, so the same 20,000 limit applies here.

6. What is the hard limit to real-time or historical reporting?

Real-time reporting using CosmoCom's N+1 scaling technique, so there are no limits here --- just add more servers. Historical reporting information is stored in standard SQL databases, so there is no hard limit here.

7. Is there a maximum number of skills that can be defined per system in skills-based routing?

No, there is no limit.

8. What is the maximum number of preferences available to identify a skill in skills-based routing?

There is no limit.

H. Reporting

1. What features are available to monitor call center activity? For example, is there support for real-time event monitoring, are there features to view and report queues that service multiple channels (i.e., voice, e-mail, fax, and Web), and can supervisors monitor and record agent activity for quality assurance or compliance with federal and state law? **Limit you answer to 250 words.**

The supervisor interface enables monitoring of agents via silent monitoring mode, which is available for all media types including telephone calls, email, or chat. For telephone calls and web chat, supervisors can also use a whisper mode, which allows them to coach the agent without the caller hearing or reading the exchange, or a barge-in mode, which enables three-way communication among the agent, supervisor, and caller.

Supervisors have a real time view of all contact center activities including queues, skills, teams, groups, and more. Statistics for all channels are completely unified, so that supervisors can see

the type of call an agent is handling, and see how many calls of each media type are waiting in queue. In addition, supervisors can access a wide range of historical reports that show similar information about their relevant call center activity over past periods.

Supervisors can view phone, email, and web chat recordings with the browser-based interface, and/or to listen to a sample of telephone calls that are serviced from a queue or group of queues by calling into the system from any standard telephone. Recording can be based on sampling (for quality management, total recording, and on-demand recording.

2. Is business data available through the reporting module used for the call center? Y/N

Any piece of data can be associated with the call, stored with the other call data in the open database, and be available for use in reporting.

3. Can reports run on regular schedules? Y/N

Yes, reports can be scheduled.

4. Can reports be automatically published for review in HTML or other formats for review by supervisors, etc.? Y/N

Yes.

5. What file formats can you export reports to?

Comma Separated Values (CSV) and Excel.

I. Business Summary (Optional)

You may use this section to summarize the business value that you are providing that you were not able to cover in any of the above sections. You may also use it to make additional recommendations or comments on the RFI. **Limit your answer to 200 words.**

Unlike other systems, from it's inception in 1996 CosmoCall Universe was designed to be an IP-based, unified contact center system. This is why CosmoCom can boast of having the most mature IP solution in the call center industry today. And since the unified queuing, routing, reporting, and administration was designed from the ground up to support all types of contacts, there are no compromises in the implementation.

Because of its unity, much of the integration required in legacy call centers is unnecessary with CosmoCall Universe. IVR, ACD and Agent are automatically synchronized and always have the same complete call-related information available. Integration to external systems such as CRM is also greatly simplified because of this unity. The result is that integration is completed more quickly and much less expensively than in the legacy environment, typically in hours or days, rather than weeks and months.

J. Pricing Summary and Totals

1. Describe the business model used to market and sell the call center?

The system is sold using several models: Direct, VARs, OEMs and service providers offering Contact Center on Demand via a hosted service model.

Limit your answer to 50 words or less.

2. Is the system purchased through direct sale, resellers, and/or channel partners?

_X_ Direct sale
_X_ Certified Resellers
_X_ Channel Partners
__ Resellers
_X_ Other (Please explain)

The CosmoCall Universe system is also available as a hosted service through many major telcos and non-Telco ASPs. In this model, the entire CosmoCom system is located at the ASP's hosting facility. The infrastructure is managed by the ASP, but the complete self-administration capability is available to the customer to create and control all aspects of their virtual call center.

3. Estimate the cost of the call center for Kodiak's 300 call agents.

$675,000

4. Estimate the cost for the first year of maintenance and support.

$125,000

5. Do you provide on site training?

___No
_X__Yes (answer question 6)

6. If you provide on site training, what would be the cost to train approximately 200 Kodiak agents and supervisors?

$25,000

VII. Vendor Information

1. How long have you been in business?
Nine years.

2. What is the size of your organization by number of employees?
110 employees.

3. How long has the product been shipping?
Eight years.

4. Do you provide onsite support for installation and configuration?
Yes.

5. In how many cities do you provide onsite support?
Globally.