



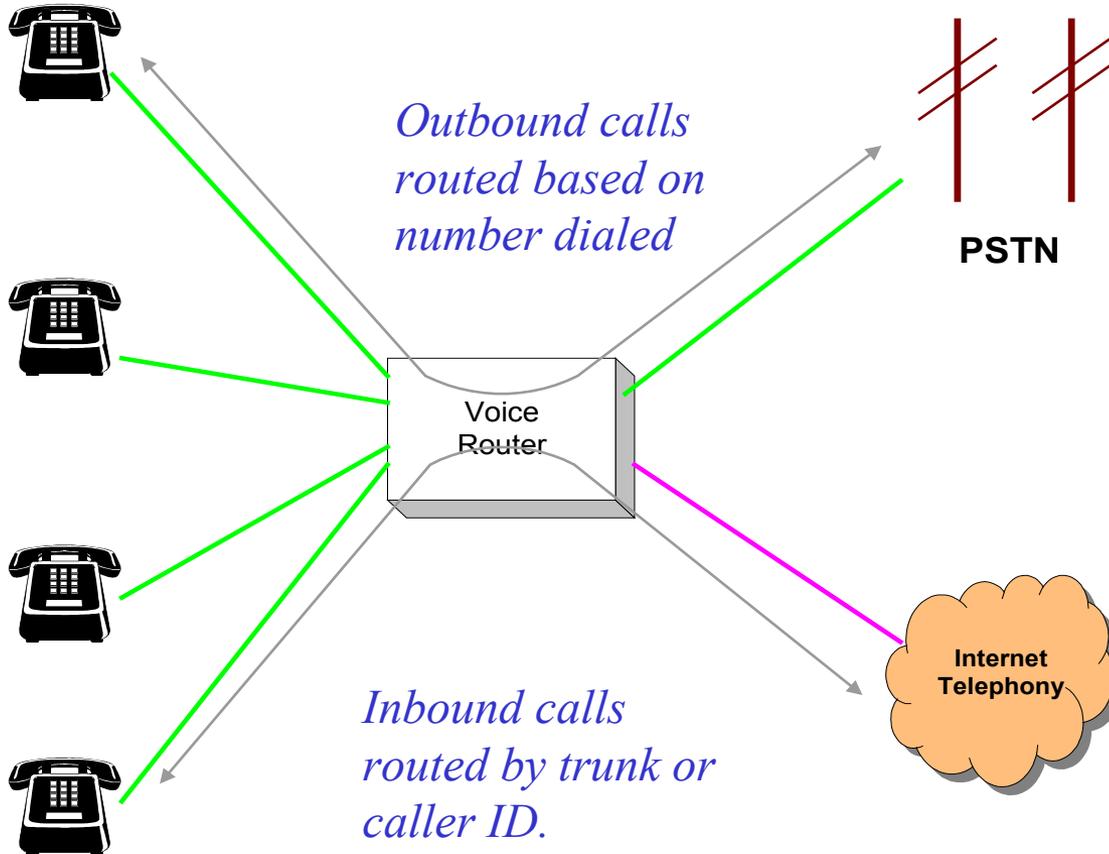
The Product Overview



The world's first 'Call Router'



What's a 'Call Router'?

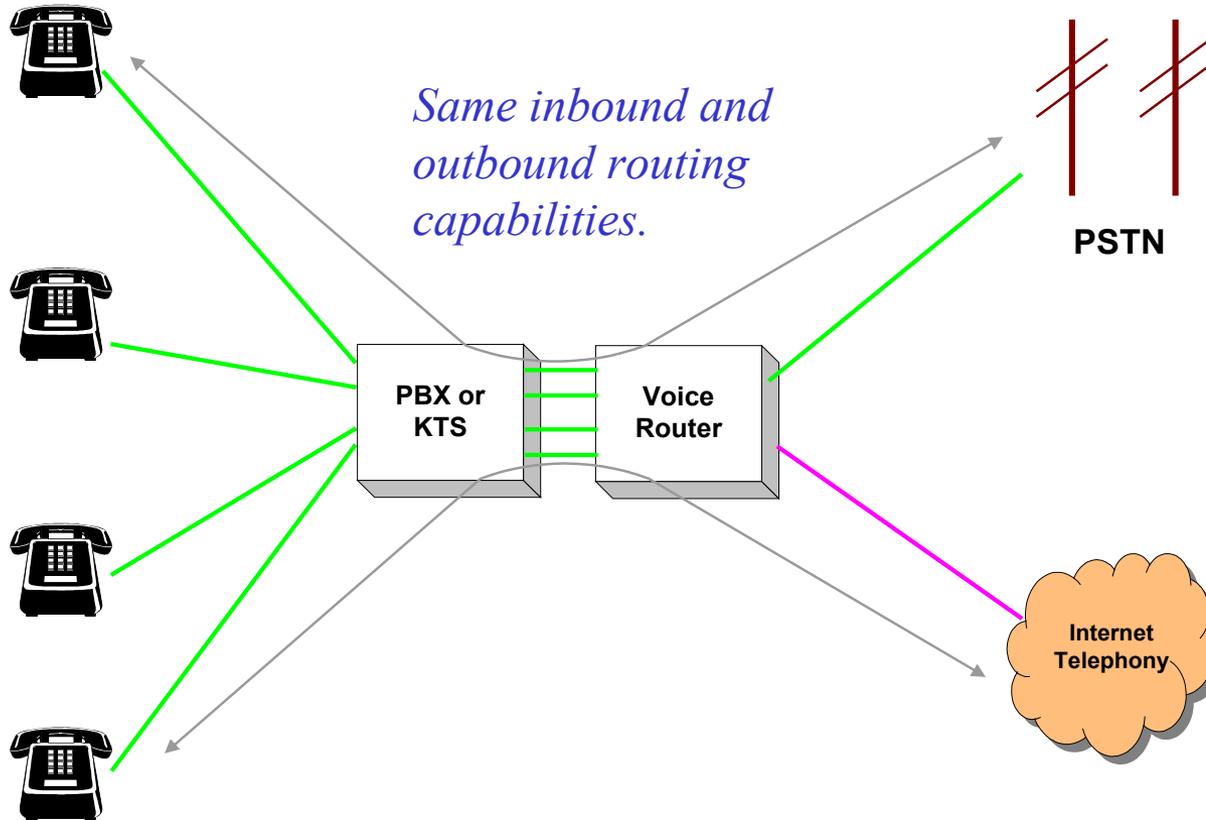


- Both inbound and outbound calls can be routed in a user definable manner.
- Usually outbound local, toll-free and E-911 are sent to local lines.
- Long distance, international and site to site calls are routed over VoIP
- Inbound calls can use trunk or callerID based routing.

Unifies the PSTN and VoIP worlds from the user's perspective



Works with PBX and KTS systems as well



- Easy to install connects directly to the trunks of the PBX/KTS.
- Provides the same inbound and outbound routing facilities without modification to the PBX/KTS.

Makes the adoption of VoIP by small business very simple



Takes the risk out of moving to VoIP



Cashmere provides a safety net to using VoIP so that the phones will always work – just like they always have, guaranteed

- Cashmere provides numerous safety backups to using VoIP.
- If the network fails or degrades it will optionally route calls over the PSTN until the problem is fixed – completely automatically.
- Even if power fails the phones will still work – although the routing and other facilities will not.

Cashmere delivers the savings of VoIP with the reliability of the PSTN



Keep your existing phone numbers



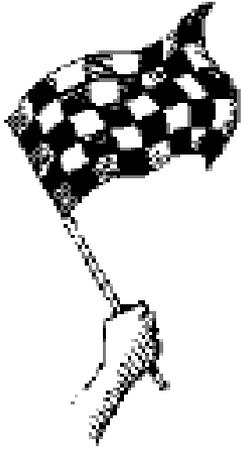
Keep the gears of your business turning without any disruption while migrating to the lower cost, more flexible world of VoIP.

- Cashmere brings together the PSTN and VoIP worlds.
- Keep your existing phone numbers for all your inbound and outbound local traffic. Your customers continue to contact you the same way they always have.

Another way in which Cashmere takes the risk out of moving to VoIP



Get the most out of the new VoIP Service Providers



***New VoIP service providers
combined with the trusted PSTN
- It's a winning combination.***

- VoIP is more than just saving money – (although that's pretty compelling).
- The new VoIP service providers offer numerous new services, including multi-site connectivity, conferencing, advanced voice mail and much more.
- Using Cashmere businesses can take advantage of these compelling services with absolutely no risk and no downside.



More ways Cashmere saves time and money.



***Cashmere's client side apps
and routing capabilities save
you more money and make
you more efficient.***

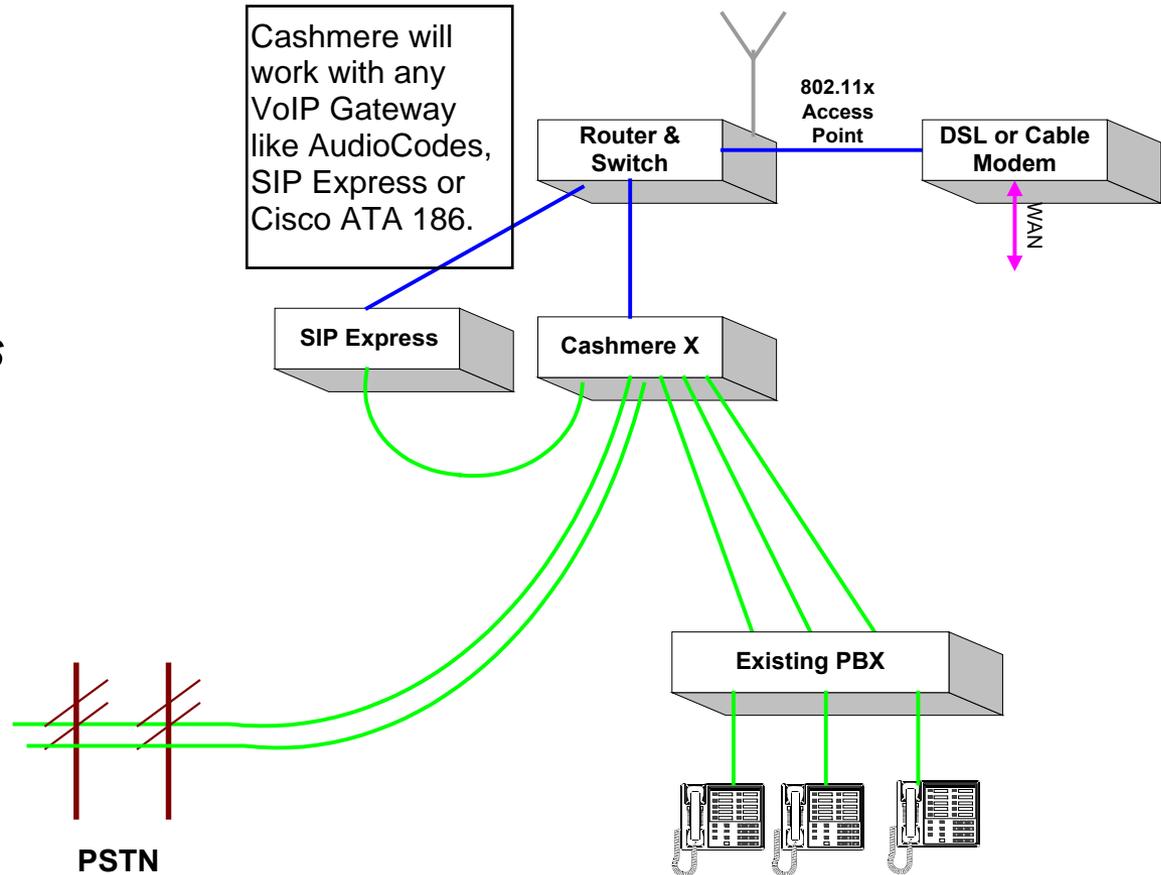
- In addition to its routing facilities, Cashmere has many utilities:
- Pop Caller ID: Provides on screen caller ID on any trunk (PSTN or VoIP) that has the Caller ID service.
- Accurate inbound and outbound call logs for both PSTN and VoIP calls.
- Connect a standard answering machine to Cashmere port and have it pick up on all unanswered calls – so that they are all in one place.
- Cashmere Plus provides a number of call center facilities:
 - Call monitoring.
 - Call forwarding
 - Dial from database
 - Integration of IVR or music on hold.



Cashmere is easy to install

To Install:

- 1) **Plug PBX into Cashmere's line ports.**
- 2) **Plug PSTN & VoIP trunks into Cashmere's trunk ports**
- 3) **Plug Cashmere into Ethernet network**
- 4) **Start making and receiving calls across PSTN and VoIP from existing phones**



Cashmere works with the ATA186 and similar VoIP gateways – that's what the VoIP service providers are currently shipping.



Cashmere Configuration Manager

Set up the inbound and outbound call routing tables, eg

"If a call made on Line 1 is classified as local what's the most preferred trunk on which to route it."

Display of network information

Cashmere Configuration Manager Beta 0.5

Inbound Routing

| | Pref #1 | Pref #2 | Pref #3 | Pref #4 |
|---------|---------|---------|---------|---------|
| Trunk 1 | +Line 4 | Line 1 | Line 2 | X |
| Trunk 2 | +Line 4 | Line 1 | Line 2 | X |
| Trunk 3 | Line 3 | X | X | X |
| Trunk 4 | X | X | X | X |

Outbound Local Routing

| | Pref #1 | Pref #2 | Pref #3 | Pref #4 |
|--------|---------|---------|---------|---------|
| Line 1 | Trunk 1 | Trunk 3 | X | X |
| Line 2 | Trunk 1 | Trunk 3 | X | X |
| Line 3 | Trunk 3 | Trunk 1 | X | X |
| Line 4 | X | X | X | X |

Outbound Long Dist Routing

| | Pref #1 | Pref #2 | Pref #3 | Pref #4 |
|--------|---------|---------|---------|---------|
| Line 1 | Trunk 2 | Trunk 1 | Trunk 3 | X |
| Line 2 | Trunk 2 | Trunk 1 | Trunk 3 | X |
| Line 3 | Trunk 2 | Trunk 3 | Trunk 1 | X |
| Line 4 | X | X | X | X |

Network Parameters

Network Time: 14:25:10 JAN 14

Time Offset: -5

Cashmere IP: 192.168.1.80

HW Rev 0.9M

Save Refresh Connect Log Off

Call Classification

Loc LDist Blk: 1.[1-9].[0-9].[0-9]

Loc LDist Blk: 0.1.1

Loc LDist Blk: 1.8.[0-9].M

Loc LDist Blk: 1.9.[0-9].M

Loc LDist Blk:

Loc LDist Blk:

Loc LDist Blk:

VoIP and QOS

Trunk 1 Trunk 2 Trunk 3 Trunk 4

QOS Threshold: 200 105 mS

| | |
|----------------|---------------|
| 66.218.71.198 | 63.87.252.186 |
| 198.133.219.25 | 148.87.9.44 |
| 132.163.4.102 | 132.163.4.103 |
| 66.243.43.21 | 192.168.1.1 |

Define call classifications with powerful but easy use dial patterns

Define which trunks are VoIP and set QOS threshold

Hosts used for QOS measurement

Cashmere Demo Desktop Client

(For local or remote use by up to 32 concurrent users)

Provides status on all trunks

Time and Date from network time servers

Provides name and number

-  Not connected
-  Idle
-  Ringing
-  Inbound
-  Outbound Local
-  Outbound LDist



VoIP trunks are ringed with either Green (QOS OK) or Red (QOS Failed)

Detailed call log of the last 120 calls. This can be printed or saved if required

Example Call Log

| Call # | In/Out | Number | Name | Duration | Time | Rings |
|--------|---------|-------------|---------------|----------|----------------|-------|
| #1 | In:3 | 19196191018 | ONES JENNIFER | 0m 22s | 3:36 PM DEC 1 | 2 |
| #2 | Loc:3 | 7465448 | - | 0m 27s | 3:31 PM DEC 1 | - |
| #3 | Loc:3 | 7466328 | - | 0m 8s | 3:31 PM DEC 1 | - |
| #4 | X:1 | 2037020628 | - | - | 3:28 PM DEC 1 | 3 |
| #5 | LDist:2 | 12037466134 | - | 0m 10s | 3:29 PM DEC 1 | - |
| #6 | X:1 | 2037020628 | - | - | 3:28 PM DEC 1 | 3 |
| #7 | LDist:2 | 12037466134 | - | 0m 13s | 3:28 PM DEC 1 | - |
| #8 | In:1 | 2037020628 | - | 0m 13s | 3:28 PM DEC 1 | 4 |
| #9 | LDist:2 | 12037466134 | - | 0m 28s | 3:28 PM DEC 1 | - |
| #10 | In:1 | 2037020628 | - | 0m 4s | 3:27 PM DEC 1 | 4 |
| #11 | LDist:2 | 12037466134 | - | 0m 19s | 3:27 PM DEC 1 | - |
| #12 | In:1 | 2037020628 | - | 0m 15s | 3:26 PM DEC 1 | 4 |
| #13 | LDist:2 | 12037466134 | - | 0m 30s | 3:26 PM DEC 1 | - |
| #14 | LDist:2 | 14135721769 | - | 0m 47s | 3:13 PM DEC 1 | - |
| #15 | Loc:3 | 7338727 | - | 0m 2s | 3:14 PM DEC 1 | - |
| #16 | LDist:2 | 12127805799 | - | 19m 54s | 2:47 PM DEC 1 | - |
| #17 | LDist:2 | 19179227222 | - | 1m 20s | 2:36 PM DEC 1 | - |
| #18 | Loc:3 | 7338727 | - | 0m 5s | 1:21 PM DEC 1 | - |
| #19 | X:1 | 2127805799 | FELDMAN,DAVID | - | 12:32 AM DEC 1 | 8 |
| #20 | X:1 | 2127805799 | FELDMAN,DAVID | - | 12:32 AM DEC 1 | 14 |
| #21 | Loc:3 | 7338727 | - | 0m 35s | 12:32 AM DEC 1 | - |
| #22 | Loc:1 | 8603502339 | - | 1m 15s | 11:38 AM DEC 1 | - |
| #23 | LDist:2 | 14135721769 | - | 10m 24s | 11:18 AM DEC 1 | - |
| #24 | In:1 | 4135721769 | KROLL, D | 1m 20s | 11:16 AM DEC 1 | 2 |

- *Call Type: Local, LDist, Inbound or Abandoned together with trunk ID*

- *Number dialed or Caller ID*

- *Call time and duration*

- *Number of rings before answered*



Cashmere is very affordable



Cashmere's routing technique is the subject of a US patent application.

- With cost savings for even the smallest business measured in hundreds of dollars per month, Cashmere usually pays for itself in a matter of weeks.
- Cashmere provides the IP information services that enable every company to have sophisticated CRM to improve their productivity.

Cashmere delivers Enterprise Power at Small Business Prices



Appendix - Additional Technology Information



Defining the Dial Patterns and Routing

- Three possible classifications: Local, Long Distance, and Call Block.
- The user can define patterns, example:
 - P1 = 1,[1-9],[0-9],[0-9] (matches 1203, 1508 etc)
 - P2 = 0,1,1 (011 international dial prefix)
 - P3 = 1,8,[0-9],M (matches 1800, 1866, etc)
 - P4 = 1,9,[0-9],M (matches 1900 etc)
- Patterns can be up to 16 digits long.
 - For example, block specific numbers, or all long distance calls to China, or whatever...
- The routes are then defined with rules comprised from the patterns and the operators # = OR, &=AND, !=NOT, example
 - Long Dist = P1#P2&!P3
 - Call Block = P4
 - Local = implicitly everything else

The North American Dial Plan is the default



Checking the voice quality

- Cashmere uses ICMP and cycles through a number of sites and measures:
 - Mean time
 - Variance (jitter)
 - Packet loss
- Cashmere also checks for any LAN issues, i.e. loss of access to the gateway.
- These metrics are fed into the router and compared to user defined criteria for acceptable speech quality.
- When the network connection QOS falls below these criteria, the outbound routing tables have VoIP connections disabled, forcing calls to be routed over the PSTN until the situation improves.

Even with a poor ISP the call will always go through



Embedded Call State Server

- Cashmere contains an IP Call State Server that distributes trunk events to clients that subscribe to this service.
- These services are can be accessed locally or remotely and include:
 - Caller ID - MDMF or SDMF format within a UDP/TCP packet.
 - Call classification – Inbound,Outbound Local, Outbound Long Distance, etc as defined by the users call classification patterns and rules.
 - Number of rings before a call was answered – for customer service monitoring and the like.
 - Abandoned calls.
 - Call start time and duration.
 - Trunk and Line on which the call was placed or received.

Adds the front end IP services for real time CRM



We hope you enjoyed the overview of this unique product.

This product will help make VoIP deployments painless and fast and allows you to make VoIP savings and features a reality with legacy systems.

Please contact ABP to discuss this product in more detail and to talk about your application.

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