

Bell Labs PSTN Feature Assessment for BT

BT Assessment							Bell Labs Analysis		
Index	Product Name + Sub Product Name	Description/Comments	Implementation Assessment	Difficulty of Implementing in an NGN	Category	Complex for NGN	Bell Labs Assessment & Industry Perspectives	Bell Labs	Outlook
1	3G Video transit calls	Enables Video telephony calls from/to mobile phones to transit BT's network using ISDN transit capability (64kbit/s clear path). Since OLO interconnect will be at NGSs for Pathfinder 3G Video transit calls will not route over the 21CN. Wholesale service for conveyance of CP's traffic.	Delay sensitive. BER: 1 in 10 to 8; ISDN User part; coder: H.264 M	High ISDN data service	ISDN	High	Same.	High	Transitional
2	Cardway	The BT Cardway service provides a means of data communication between terminals connected via PSTN or ISDN lines and a central host computer connected via the Cardway Delivery Connection. The principal application is the authorisation of credit card transactions in retail stores along with Visa II ATMs.	X.25 data on B-Channel; Short CHT -> GW Call processing capacity	High Edge of network DASS2 data service	ISDN	High	Same. TISpan defined ISDN2 over IP standards with X.25 on IUA over SCTP/IP. Solution requires a next generation protocol handler (NGPH) between the NGN and the existing X.25 network. Given that ISDN is a transitional service, vendors' commitments for developing ISDN card on MSAN is limited. Short call holding time increases requirement of call processing capacities.	High	Transitional
3	Conference Call - Express, Plus and Premium	Conferencing product. Edge of network platform. Uses basic call and sometimes number translation service for call set-up.		Edge of network - Voice service - Low	ASP	Low	Same. TISpan-compliant conference invocation and control procedures are in NGN available for both advanced endpoints (e.g., SIP based) and traditional analog phones. Additional capabilities such as Click to Conference could enhance service offer.	Low	Future
4	Enterprise Solutions (UK/ROW)	This is a managed conferencing service. The Conferencing platforms will remain located outside the 21C network during Pathfinder timescales. NB this product is now no longer found in the RoP		N/A - removed from portfolio	N/A	N/A	N/A	N/A	N/A
5	ReservationLess	Voice conferencing service that doesn't require a time slot or number of lines to be booked, i.e. like MeetMe		As row 3	ASP	Low	Same as in row 3.	Low	Future
6	Text Direct	This is the Deaf and Dumb users' Text system using 18000, 18001 and 18002 and modem based transport over the voice network.	Support for VBD in a NGN (IP) environment. Non standard modems not using calling/answer tones (V.25 or Bell 103 startup sequences). Applies to older pre-standards textphones. Newer models conforming to V.18 should work OK as they use calling/answer tones. Calling/answer tones change the gateways form speech to data mode. i.e. remove EC and NLP and fix the DJBs.	Support for non standards data modulations that don't use calling/answer tones. Requires DSP workarounds in the IP gateways or modem changeouts that have a standards based implementation.	VBD	High	Same.	High	Future
7	Voice DQ	Directory Access / Directory Enquiries (195 Blind)	Call routing capability. No special requirement,	Line power. G.711 codecs, high availability, disaster recovery Low.	ASP	Low	Same.	Low	Future
8	Outbound Services	Global outbound calls from outsourced contact centres. NGS interconnect.	Call routing capability. No special requirement,	Voice, may be performance issues - dialers, short hold calls. - low	Call Server Routing	Low	Same.	Low	Future
9	(Admin Controlled)-Admin controlled ICB all calls	Customer's line configured, by the administration, to bar all incoming calls.		Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future

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10	<b>(Admin Controlled)-Admin controlled OCB all calls</b>	Customer's line configured, by the administration to bar either all outgoing calls or calls to certain destinations.		Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future
11	<b>(Admin Controlled)-Admin controlled OCB all calls except 999 etc.</b>	Remains as Call barring option 1 after FRN002 updates.		Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future
12	<b>(Admin Controlled)-Admin controlled PRS &amp; International Call Barring</b>	Call barring option 3 under FRN002 updates.		Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future
13	<b>(Admin Controlled)-Admin controlled PRS Call Barring</b>	Call barring option 6 under FRN002 updates.		Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future
14	<b>Basic Voice Calls-Fixed to Mobile</b>	Basic call functionality	Call routing capability. No special requirement,	Line power. G.711 codecs, high availability, disaster recovery Low.	Call Server Routing	Low	Same.	Low	Future
15	<b>Basic Voice Calls-Local</b>	Basic call functionality	Call routing capability. No special requirement,	Line power. G.711 codecs, high availability, disaster recovery Low.	Call Server Routing	Low	Same.	Low	Future
16	<b>Basic Voice Calls-National</b>	Basic call functionality	Call routing capability. No special requirement,	Line power. G.711 codecs, high availability, disaster recovery Low.	Call Server Routing	Low	Same.	Low	Future
17	<b>Business Port</b>	BT BusinessPort is a product aimed at corporate institutions seeking to take advantage of lower call charges provided by IP call routing enabling employees to connect remotely to their corporate networks via the PSTN. From a 21C perspective it utilises a call into the legacy to reach a NAS associated with the Dial IP core network.		assumed VBD, high, is this still a relevant service (why not just use dsl + VPN)	VBD	High	Same. Better VoBB/VPN service offer substitute available in NGN.	High	Sunset
18	<b>Call Barring</b>	Permits the Administration to bar incoming and/or outgoing calls on behalf of a customer. Outgoing calls may be barred to particular types of destination based on dialled number, e.g Premium rate, National, International, etc.	Call routing capability. No special requirement,	Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future
19	<b>Call Director (Call Optimiser/advanced PSTN)</b>	Uses the Network retranslation feature against the directory number in the terminating Call Server and then triggers the diverted call in the NGS to the IN for number translation and onward routing. (Eg: If user calls from Liverpool, divert to Liverpool number)		IN Inbound Service - High	ASP	High	Same.	High	Future
20	<b>Call Diversion</b>	Call diversion Immediate, on Busy, or No-reply.	As Indirect Access	Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future
21	<b>Call Diversion-Call Diversion admin controlled</b>	Configuration of a customer's line, by the administration, to divert incoming calls either immediately or when the call line is busy or does not reply within a pre-defined period of time	As Indirect Access	Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future

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22	<b>Call Diversion-Call Diversion customer controlled</b>	Customers may configure their lines to divert incoming calls to another destination of their choice. Diversion may be immediate or configured to work when the diverting line is busy or fails to answer an incoming call within a certain, administration set, period of time.	As Indirect Access	Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future
23	<b>Call Diversion-Remote Call Forwarding</b>	Remote Call Forwarding (RCF) is typically used to allow a customer to advertise a geographical number related to an area in which they do not actually have a physical presence.	As Indirect Access	Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future
24	<b>Call Diversion-Smart Divert</b>	A service enabling customers to change the diversion type and destination of a line from a remote location. The user dials a telephone number that gives access to the Remote Control of Supplementary Services facility on the diverting line's DLE/Call Server. The user is then able to set up or cancel diversion by use of the appropriate control codes. Operation of the service is protected by the use of a PIN as part of the control code sequence.		Medium -need an IVR	Call Server Feature	Medium	Same.	Medium	Future
25	<b>Call Sign</b>	Additional numbers provided against a customer's line which, when called, apply a ringing cadence distinct from the cadence applied when the main number is called. Two additional cadences are available each requiring a dedicated Call Sign number.	As Indirect Access	Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future
26	<b>Call Termination DLE</b>	These are calls originating from a CP and terminating on a BT line. This will be seen as a 'normal' call arriving from an NGS.	Call routing capability. No special requirement,	Low	Call Server Routing	Low	Same.	Low	Future
27	<b>Caller Display</b>	A service whereby a called customer receives the telephone number of the caller on dedicated caller display enabled CPE. The information is sent over the called customer's line using V.23 FSK signalling. If the calling customers telephone number is withheld or unavailable an appropriate text string is sent in its place.	Requires V.23 FSK signalling from the line cct. Requires provisioning in the ATA. Need functionality to convert the CLI from International format to national format.	Medium	Call Server Feature	Medium	Same.	Medium	Future
28	<b>Caller Redirect</b>	Where a customer has had a change of number this facility may be provided against the vacated number to provide callers with an announcement advising them of the customer's new number. The announcement is played from the MAS-T.		Medium -need an IVR	ASP	Medium	Same.	Medium	Future
29	<b>Calls to Ported Numbers</b>	A regulatory requirement whereby customers may transfer their business between communications providers without requiring a change of directory number (DN) as long as certain geographic criteria are met. This covers the concept of both BT DNs ported-out to other SPs, and SP DNs ported-in to BT.	Implemented using call forwarding with the addition of network prefix to the number. Ideally requires number database in an NGN environment. Uses routing based upon DLE origin. Must not change traffic routings.	Cost of providing a central number database and network access to it. High	Regulatory	High	Same. Mechanism to identify ported numbers in/out BT were not discussed. Feature implementation in NGN <i>with</i> a central NP DB requires NP trigger provisioning on MGCF (or NGS). The routing is done based on the Location Routing Number (LRN). Industry-wide impact.	High	Future

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30	<b>Carrier Pre Selection (CPS)</b>	Customers can choose to have specific call types routed via specified communications providers.	Uses routing based upon DLE origin. Must not change traffic routings.	Emulating the routing in the NGN environment. High	Regulatory	High	Same. Generally, several carrier pre-select methods might be implemented (e.g., IN-based; digit analysis) to determine the carrier of record and the appropriate "cic=" parameter. Industry-wide impact.	High	Future
31	<b>Choose To Refuse</b>	Also called Last Incoming Call Barred (LICB). A Core IN service enabling users to bar incoming calls from particular numbers. The terminating Call Server performs triggering to the IN.	Call routing capability. No special requirement,	IN service in BT	ASP	High	Feature is generally available in NGN using enhanced Selective Call Rejection (SCR). Allow the SCR subscriber to enter a dialed code which causes the number of the last incoming call, if available, to be placed on the Selective Call Rejection Screening List.	Medium	Future
32	<b>CPS SAD calls</b>	This is Carrier Pre-selection - Same & Adjacent DLE. Pathfinder does not provide a routing solution equivalent to that existing in the legacy. Instead, 21C originated "SAD" calls will trombone via the SP network but by means of a billing solution, charge the SP at an appropriately discounted rate.		irrelevant to NGN as depends on DLE structures. Hard to replicate	Interconnect	High	Same. See feature #30. BT NGS limitation.	High	Future
33	<b>Direct Connect</b>	Fixed destination call. This will connect a caller to a single pre-programmed telephone number without the need to dial any digits.	As Indirect Access	Hotline, low with H.248, high with SIP.	Line Control	Low	Same. Many SIP Phones and some IADs support Hotline/Warmline functionality as an integrated capability, this feature provides the end user with a switch-based automatic dialing capability. Hotline functionality automatically dials a pre-provisioned DN when an immediate "off-hook" is detected. Warmline dials a pre-provisioned DN when an off-hook timeout with no dialed digits is detected.	Low	Future
34	<b>Direct to Fixed (OLO-BT)</b>	Normal basic incoming call functionality. Calls may be received via the legacy network or the NGN CC.	Call routing capability. No special requirement, Uses BT transmission infrastructure to extend an interconnect cct form say an NGS node through to a DLE.	Line power. G.711 codecs, high availability, disaster recovery. Also charging based upon the IP address pairs used by the media. Cost of terminating traffic to TDM endpoints. High Cost.	Call Server Routing	Low	Same.	Low	Future
35	<b>DQ118 Interconnect Calls</b>	Interconnect calls from OCPs to 118DQ SPs may route onto the 21C network via the NGN CC.	Call routing capability. No special requirement,	As Direct to Fixed but different charge rates/billing complexity. High	Call Server Routing	High	Same.	High	Future
36	<b>DQ118 Transit</b>	Transit traffic from CPs to 118DQ SPs hosted on OCP networks may be routed across the 21C Network.	Call routing capability. No special requirement,	As Direct to Fixed but different charge rates/billing complexity. High	Call Server Routing	High	Same.	High	Future
37	<b>Freephone Transit</b>	Transit traffic may be possible using the NGN CC.	Call routing capability. No special requirement,	As Direct to Fixed but different charge rates/billing complexity. High	Call Server Routing	High	Same.	High	Future
38	<b>IDD</b>	International Direct Dial. Being able to call phones abroad without going through an operator.	Requires routing to an IDD gateway based upon country code. Also variable number lengths incurring additional PDD.	Issues with VBD as more IDD connections move to IP. Medium	Call Server Routing	Medium	Same.	Medium	Future

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39	<b>IDD (to SMP routes from DISCs)</b>	The Digital International Switching centres will be accessed via a selected NGS for Pathfinder.		Call Routing - Low	Call Server Routing	Low	Same.	Low	Future
40	<b>IDD Incoming Calls (incl. ISDN)</b>	Calls arriving from other countries.	Call routing capability. No special requirement,	Issues with VBD as more IDD connections move to IP. Medium.	Call Server Routing	Medium	Same.	Medium	Transitional
41	<b>IDD Inter Tandem Conveyance</b>	IDD transits will not involve 21C in iRE timescales. Wholesale service for conveyance of CP's traffic		Irrelevant to NGN as depends on TDM transit layer structures. Hard to replicate	Interconnect	High	Same.	High	Sunset
42	<b>Inbound Calls</b>	"Inbound" is an umbrella title for a number of different services including non-geographic numbers. Wholesale service for conveyance of CP's traffic	Call routing capability. No special requirement,	Line power. G.711 codecs, high availability, disaster recovery. Also charging based upon the IP address pairs used by the media. Cost of terminating traffic to TDM endpoints. High Cost.	Call Server Routing	High	BT interconnect and billing implementation specifics. Capabilities, otherwise, are generally supported in NGN	Medium	Future
43	<b>Inbound Calls-Protected Number Plan</b>	Protected Number Plan is a back up to Service Providers' (SP) advanced call routing service. A pre-arranged routing plan is agreed with each SP who takes this service, which can be invoked in the event of a serious ICM outage. The decision to invoke the plan will be taken by BT and will be prioritised by the Product Line. Wholesale service for conveyance of CP's traffic.	Requires IN translations	IN service in BT	ASP	High	Same.	High	Future
44	<b>Inbound Services</b>	In Bound Services [aka telemarketing Services] is an umbrella title for a number of different services including non-geographic numbers. Wholesale service for conveyance of CP's traffic	Requires In translations	IN platform required or embedded in the NGN platform. High	ASP	High	Same. See also Feature #42	High	Future
45	<b>Indirect Access</b>	Customer manually prefixes Indirect access codes to their called numbers.	Done using the IN. Overlap sending required as no analysis undertaken of the called number. Need also to route on DLE origin.	Overlap sending support required in SIP. No clear agreed mechanism in international standards but UK specific solutions exist for SIP-I. Also need to include DLE origin in the routing. High.	Regulatory	High	The overlap sending feature is designed to reduce end-of-dialing delay when the caller's UE digit map is not able to identify a completely dialed destination number. In such cases, the UE typically waits for an inter-digit timer to expire before sending an INVITE request with the collected digits. Since the inter-digit timeout value is typically several seconds long, the caller may perceive that call setup is taking a long time. Solutions leveraging the "in-dialog" method as described in TS 183 056 and TS 183 043 are available in marketplace.	Medium	Future
46	<b>Indirect Access 3rd Party Handover</b>	An ability to handle IA calls and to route to a TDM link belonging to another (3rd party) operator. Wholesale service for conveyance of CP's traffic	As Indirect Access	As Indirect access but additional complexity due to billing. Low	Interconnect	Low	Same.	Low	Future

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47	<b>Indirect Access Transit Calls</b>	The Indirect Access Transit products allow end user customers access to third party networks and service providers by means of dialing a unique access code in the form of 1XX(X). The access call is routed via the routing plan agreed between the Originating Network Operator and BT for the incoming route and for the outgoing route, between the IA Operator and BT. The caller is not charged for the access call. Transit calls will not be supported on Pathfinder. Not expected across the NGN CC with iRE.	As Indirect Access; As per IDD calls.	As Indirect access but additional complexity due to billing. Low	Interconnect	Low	Same.	Low	Future
48	<b>Indirect Conveyance-Indirect Access</b>	A form of Indirect Access. Wholesale service for conveyance of CP's traffic	As Indirect Access	As Indirect access but additional complexity due to billing. Low	Regulatory	Low	Same.	Low	Future
49	<b>Indirect Conveyance</b>	A form of Indirect Access. Wholesale service for conveyance of CP's traffic	As Indirect Access	As Indirect access but additional complexity due to billing. Low	Regulatory	Low	Same.	Low	Future
50	<b>Indirect Conveyance-Indirect to CPS (BT-OLO)</b>	A form of Indirect Access. Wholesale service for conveyance of CP's traffic	As Indirect Access	As Indirect access but additional complexity due to billing. Low	Regulatory	Low	Same.	Low	Future
51	<b>Indirect Conveyance-Indirect to Fixed (BT-OLO)</b>	A form of Indirect Access. Wholesale service for conveyance of CP's traffic	As Indirect Access	As Indirect access but additional complexity due to billing. Low	Regulatory	Low	Same.	Low	Future
52	<b>Indirect Conveyance-Indirect to Freefone (BT-OLO)</b>	A form of Indirect Access. Wholesale service for conveyance of CP's traffic	As Indirect Access	As Indirect access but additional complexity due to billing. Low	Regulatory	Low	Same.	Low	Future
53	<b>Intelligent Network Services Call Minder Feature Interworking</b>	With Pathfinder and beyond this feature will be performed by the Call Server and not the IN.	Done using the IN.	Requires a platform solution or an IN. Needs development. Medium	ASP	High	Same	High	Future
54	<b>Inter Tandem Conveyance</b>	Inter Tandem Conveyancing is not expected with iRE but is a possibility with the NGN CC. If this is offered then it would be as IP to IP only. Wholesale service for conveyance of CP's traffic.		irrelevant to NGN as depends on TDM transit layer structures. Hard to replicate	Interconnect	High	Same and irrelevant in NGN.	High	Sunset
55	<b>Interconnect Extension Circuits</b>	An Interconnect Extension Circuit (IEC) is a connection (forming part of the 2 Mbit/s In Span Interconnect ISI/ In Building Interconnect IBI Interconnect Link) between the Multiplexor in a Remote Switch Connection, and the Multiplexor terminating the ISI/IBI Interconnect Link. Wholesale service for conveyance of CP's traffic.	Uses BT transmission infrastructure to extend an interconnect cct from say an NGS node through to a DLE.	N/A.	Interconnect	Low	Same.	Low	Sunset
56	<b>International BT business voice</b>	A BT managed service for corporate multi-site customers using BT's Core network, DISCs, and with VPN functionality across many other countries.		Call Routing - Low	Call Server Routing	Low	Same. New capabilities in NGN such as VPN Dialing and Display (VDD) allows subscribers (who are presumed to be members of a company or enterprise) to dial using VPN numbers and display the VPN numbers for calling and called line numbers are available in marketplace.	Low	Future
57	<b>International Freefone 0800</b>	An International Freefone number enables a caller to contact a business free of charge from overseas countries. The receiver of the call pays all of the call charge.		IN service in BT	ASP	High	Same.	High	Future

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58	<b>International Interconnect Calls</b>	Ability for OCPs to route calls to the BT DISCs	As per IDD calls.	Same as Outgoing IDD calls but the addition of wholesale billing.	Call Server Routing	Low	Same.	Low	Future
59	<b>IPCC (IP contact centres)</b>	MM VOIP based termination accessed by PSTN end users via the ICM BT Gain similar to the ICM. Uses the IN. triggering and IVR located in the PSTN for iRE. Wholesale service for conveyance of CP's traffic.	Wholesale billing required for call conveyance.	IN service in BT	ASP	High	Same.	High	Future
60	<b>Local Tandem Conveyance</b>	20C Billing Capability enabling wholesale billing differentiation based on Call Conveyance. On 21C will be replicated using a frozen Element Based charging matrix. Wholesale service for conveyance of CP's traffic.	Wholesale billing required for call conveyance. As per Indirect Access	N/A. Legacy related.	Interconnect	High	N/A. Irrelevant in NGN	High	Sunset
61	<b>Network Controlled Calling</b>	Restricted Outgoing Access for Aged & Disabled customers who make involuntary nuisance calls.	Number blocks allocated to DLEs and Concs.	High to replicate but very low volumes.	Call Server Feature	High	Variants of Outgoing Call Barring (OCB) are available in NGN to support this feature. Example implementation includes the following: restricting calling to destinations within certain blocking categories (for example: all calls, all local calls, all long distance calls, and so on). Determination of the category of a dialed destination address comes from provisioning of call type in digit analysis. Call barring operates by checking to see if the call category determined by digit analysis is one of the categories blocked for the calling subscriber.	Medium	Future
62	<b>NTS 3rd Party Handover</b>	As per IA	As per Indirect Access	As per Indirect Access	Interconnect	High	Same.	High	Future
63	<b>Number Allocation &amp; Selection</b>	Standard E164 Numbering and DLE based geographic allocation	Number blocks allocated to DLEs and Concs.	No association with DLEs and Cons in an NGN environment. Complicates call charging. Changes the way that routing is done. High.	Regulatory	High	Same. Administrative feature.	High	Sunset
64	<b>Reminder Call</b>	Customers may use control codes to schedule a reminder call initiated from the network at a pre-determined time.		Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future
65	<b>Ring Back-Bar use of Ring Back on a line</b>	Configuration of customers' lines such that the Ring Back When Free service is not available.		High RBWF interworking is based on DPNSS - legacy	Call Server Feature	High	Same. Note that NGS must support signaling gateway functionality that can provide protocol interworking between say, SIP Subscribe or Notify messages, and PSTN signaling messages to support CCBS between an IMS subscriber and a PSTN subscriber.	High	Transitional
66	<b>Ring Back-Bar use of Ring Back to a line (inhibit)</b>	A terminating line service which denies callers the ability to set up a Ring Back When Fee call to a busy line configured with the service. Callers who attempt to invoke RBWF receive a rejection announcement.	Charges for calls in line with the number of "hops" and distances from interconnect through to interconnect.	High RBWF interworking is based on DPNSS - legacy	Call Server Feature	High	Same as Feature #63.	High	Transitional
67	<b>Ring Back-Remove Ring Back (prompted)</b>	Configuration of a line such that it receives standard busy tone rather than busy tone interspersed with a prompted ring back announcement when outgoing calls encounter a busy destination	Charges for calls in line with the number of "hops" and distances from interconnect through to interconnect.	High RBWF interworking is based on DPNSS - legacy	Call Server Feature	High	Same as Feature #63.	High	Transitional

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68	<b>Single &amp; Double Tandem Transit-OLO to OLO Transit Mobile Number Portability</b>	20 C Billing Capability enabling wholesale billing differentiation based on Call Conveyance. Wholesale service for conveyance of CP's traffic.	Charges for calls in line with the number of "hops" and distances from interconnect through to interconnect.	Single and double tandem does not exist in an NGN environment. Need a new billing solution on ingress and egress IP addresses or a blended rate? High	Interconnect	High	Same. N/A	High	Transitional
69	<b>Single &amp; Double Tandem Transit-OLO to OLO Transit to Fixed</b>	20 C Billing Capability enabling wholesale billing differentiation based on Call Conveyance. Wholesale service for conveyance of CP's traffic.	Charges for calls in line with the number of "hops" and distances from interconnect through to interconnect.	Single and double tandem does not exist in an NGN environment. Need a new billing solution on ingress and egress IP addresses or a blended rate? High	Interconnect	High	Same. N/A	High	Transitional
70	<b>Single &amp; Double Tandem Transit-OLO to OLO Transit to LRCS</b>	20 C Billing Capability enabling wholesale billing differentiation based on Call Conveyance. Wholesale service for conveyance of CP's traffic.	Charges for calls in line with the number of "hops" and distances from interconnect through to interconnect.	Single and double tandem does not exist in an NGN environment. Need a new billing solution on ingress and egress IP addresses or a blended rate? High	Interconnect	High	Same. N/A	High	Transitional
71	<b>Single &amp; Double Tandem Transit-OLO to OLO Transit to Mobile</b>	20 C Billing Capability enabling wholesale billing differentiation based on Call Conveyance. Wholesale service for conveyance of CP's traffic.	Charges for calls in line with the number of "hops" and distances from interconnect through to interconnect.	Single and double tandem does not exist in an NGN environment. Need a new billing solution on ingress and egress IP addresses or a blended rate? High	Interconnect	High	Same. N/A	High	Transitional
72	<b>Single &amp; Double Tandem Transit-OLO to OLO Transit to National call</b>	20 C Billing Capability enabling wholesale billing differentiation based on Call Conveyance. Wholesale service for conveyance of CP's traffic.	Charges for calls in line with the number of "hops" and distances from interconnect through to interconnect.	Single and double tandem does not exist in an NGN environment. Need a new billing solution on ingress and egress IP addresses or a blended rate? High	Interconnect	High	Same. N/A	High	Transitional
73	<b>Single &amp; Double Tandem Transit-OLO to OLO Transit to Other</b>	20 C Billing Capability enabling wholesale billing differentiation based on Call Conveyance. Wholesale service for conveyance of CP's traffic.	Charges for calls in line with the number of "hops" and distances from interconnect through to interconnect.	Single and double tandem does not exist in an NGN environment. Need a new billing solution on ingress and egress IP addresses or a blended rate? High	Interconnect	High	Same. N/A	High	Transitional
74	<b>Universal Freephone</b>	A Universal Freephone number enables a caller to contact a business free of charge from overseas countries. The receiver of the call pays all of the call charge.	Routing plan per CP for routing of calls to CPs	IN service in BT	ASP	High	Same.	High	Future
75	<b>1471 Extra</b>	BT implementation is IN service		IN service in BT	ASP	High	Customer dials 1471 to find out the telephone number of the last person who called you (unless the number is withheld, unavailable or came from a switchboard extension number). BT specific, but generally available in NGN.	Medium	Future
76	<b>15x Service Access</b>	A set of access codes used by BT and OCPs enabling users to access service functions. Such calls are service addressed and delivered into the legacy network. When used by an OCP on a BT WLR etc the 15X service uses a Trunk layer IN triggering solution to route the call to the appropriate CP.		high - routing based on WLR operator not the call operator. IN service in BT	ASP	High	Same. Network feature	High	Future



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77	<b>Anonymous Call Rejection</b>	Terminating line based function. When the service is active, callers receive a rejection announcement if they have withheld their phone number from the called party.		Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future
78	<b>Auxiliary Line</b>	"Auxiliary lines" is a term used to describe hunt group functionality, e.g. provide a main number with n additional auxiliary lines. The functionality to hunt over such a group of lines is contained within the Call Server.		Call Server Feature - Low	Call Server Feature	Low	Same. Also known as MultiLine Hunt Groups (MLHGs), this feature provides a method to distribute incoming calls among idle positions within a predefined group of lines.	Low	Future
79	<b>BT Click 3rd Parties</b>	Consumer NB internet service. No registration PAYG service that is sold through 3rd parties.		VBD - not relevant anymore?	VBD	High	Same. Irrelevant	High	Sunset
80	<b>Bypass Number</b>	An additional directory number provided against a line that allows callers to "bypass" certain network services that may be active against the main number. For example, such incoming calls will bypass diversion, rejection by call barring features, or access a specific line in a hunt group.	Refers to the type of physical interconnection.	Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future
81	<b>Call Return 1471-1471 Barring</b>	The ability to use the 1471 return call is enabled by provision of the service by the administration. If this ability is not enabled use of the 1471 facility is effectively barred, however, 1471 is normally included as a default service when lines are provided.		Medium - needs an IVR	ASP	Medium	Same.	Medium	Future
82	<b>Call Return 1471-1471 Call Return</b>	Standard line service that permits the CLI of the last caller to be read out to the customer. Keying a '3' will then initiate a return call to the stored number.		Medium - needs an IVR	ASP	Medium	Same.	Medium	Future
83	<b>CLI Withholding (141 / 1470 barring etc).-1475 Call Return erasure</b>	A facility whereby a user can erase details of the last incoming call stored by the 1471 Call Return service. 1475 routes a call to a remote service platform served from the legacy. This calls the user back with an anonymous call thereby overwriting the number stored by Call Return.		Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future
84	<b>CLI Withholding (141 / 1470 barring etc).-Bar use of 141 on a line</b>	The ability to use the 141 facility to withhold CLI is enabled by provision of the service by the administration. If this ability is not enabled use of the 141 facility is effectively barred.	More of a business feature but available on WLR3 analogue.	Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future
85	<b>CLI Withholding (141 / 1470 barring etc).-Bar use of 1470 on a line</b>	The ability to use the 1470 facility to release CLI is enabled by provision of the service by the administration. If this ability is not enabled use of the 1470 facility is effectively barred.		Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future
86	<b>CLI Withholding (141 / 1470 barring etc).-Permanent number withhold</b>	Lines may be configured to either release CLI to, or withhold CLI from, called destinations.		Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future

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87	<b>CLI Withholding (141 / 1470 barring etc).-Release number on a per call basis (1470)</b>	Lines which have been configured to withhold CLI by default may be provided with the facility for users to prefix dialled numbers with the digits 1470 in order to release CLI on a per call basis.		Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future
88	<b>CLI Withholding (141 / 1470 barring etc).-Withhold number on a per call basis (141)</b>	Lines which have been configured to release CLI by default may be provided with the facility for users to prefix dialled numbers with the digits 141 in order to withhold CLI on a per call basis.		Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future
89	<b>Custodial Tagging Line</b>	Requires a separate PSTN business line to be ordered by the Home Office. For Custodial Tagging, this line is provided with the following facilities:		Service wrap feature	N/A	N/A	N/A	N/A	N/A
90	<b>Fixed Line SMS</b>	Text messaging to and from fixed lines. Uses caller display FSK signalling to initiate an answer from the SMS enabled CPE but actual text message is delivered in band, using FSK signalling, from a remote SMS service platform.		VBD - High	VBD	High	Same. Feature is also dependent on CPE capability. Better substitute in NGN.	High	Sunset
91	<b>Howler</b>	Lines which have been configured to withhold CLI by default may be provided with the facility for users to prefix dialled numbers with the digits 1470 in order to release CLI on a per call basis.		Line feature controlled by ATA or line card - Low	Line Control	Low	Same.	Low	Future
92	<b>In Span Interconnect (ISI)</b>	The Point Of Connection (POC) for ISI is the footway box where the cable from the OLO is provided	Refers to the type of physical interconnection.	Fewer ISI required. Low. CPs don't have connectivity through to BT's NGN sites but connectivity to the legacy sites exists.	Interconnect	Low	Same.	Low	Future
93	<b>Indirect Access - Route to Credit Control</b>	This service is provided for SP customers who have not paid their bills. When activated on a WA line, a caller can make calls to a very limited set of numbers, eg 999/112. However, calls to all other numbers are automatically routed to the Credit Control department of the SP.	Requires routing to the WLR provider for the line if the customer dials a chargeable number. Done via the IN. Requires an IN? Per customer profiles.	Requires origin based routing on a per line basis. Medium.	ASP	Medium	Features such as Hotline, Outgoing Call Barring are generally available in NGN	Low	Future
94	<b>Loop Disconnect Dialling-Loop Disconnect (LD)</b>	An analogue method of signalling digits from customers' CPE to the MSAN termination using loop disconnections sent at 10 pulses per second.		Line feature controlled by ATA or line card - Low	Line Control	Low	Same.	Low	Future
95	<b>Number Portability-Geographic Number Portability</b>	Normal Telephone number portability	Openreach provide this capability on legacy.	Interworking with existing number porting capability. Co-ordination between CPs. Medium/high. Depends upon the product model.	Regulatory	Medium	Same.	Medium	Future
96	<b>Number Portability- Non Geographic Number Portability</b>	A regulatory requirement whereby customers may transfer their business between communications providers without requiring a change of directory number (DN) as long as certain geographic criteria are met. This covers the concept of both BT DNs ported-out to other SPs, and SP DNs ported-in to BT.	GS provide this capability on legacy.	Need an IN platform and co-ordination between CPsMedium/high. Depends upon the product model. .	Regulatory	Medium	Same.	Medium	Future

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97	<b>Number Portability</b>	A regulatory requirement whereby customers may transfer their business between communications providers without requiring a change of directory number (DN) as long as certain geographic criteria are met. This covers the concept of both BT DNs ported-out to other SPs, and SP DNs ported-in to BT.	Duplicate	Duplicate	N/A	N/A	As above (96). Duplicate	N/A	Future
98	<b>Numbering Plan</b>	This is the Numbering plan that we use in the PSTN. The 21C Voice services will use the same numbering plan as the PSTN.	Routing plan per CP for routing of calls to CPs	If we have to use the same numbering plans then this is high.	Interconnect	High	Same. NGN offers more flexibility in terms of number assignments. Restricting number assignment to reflect PSTN will be costly.	High	Future
99	<b>Participation Media (delivered by RIDE)</b>	RIDE will be accessed via the PSTN for Pathfinder		Tele voting ASP solution in BT. Performance issues. Medium	ASP	Medium	Same.	Medium	Future
100	<b>Presentation Number</b>	An additional telephone number provided for interworking with CLI reporting services such as Caller Display and Return Call. Where a presentation number has been provided it will be displayed rather than the network/billing number associated with the calling line.	More of a business feature but available on WLR3 analogue.	transporting and presenting is low.	Call Server Feature	Low	Same.	Low	Future
101	<b>Three Way Calling-Three Party Call</b>	A facility whereby a customer engaged on a call can make an enquiry call to a third party. The customer then has the ability to toggle between the original call and the enquiry call or to connect all three parties in a conference. The controlling line may then release either or both of the other parties by means of control codes.		Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future
102	<b>Timeline</b>	Originally called the speaking clock, the Timeline service is delivered from the RIDE service platform that is accessed via a service addressed routing. The access code is 123.		call routing to service hosted on RIDE (ASP platform)	ASP	Low	Same.	Low	Future
103	<b>Wholesale Access :- Analogue Select Services-Customer Originated Trace</b>	COT enables a customer to produce a printed record, available to the administration, of a call in progress, or a call recently completed. The record contains details of the parties involved in the call and may be used, for example, in the investigation of malicious calls. The service is invoked during a call by using the recall facility and dialling a service code or by dialling the service code shortly after the call has completed.	bespoke development for COT on last answered call	medium. - not off the shelf	Regulatory	Medium	BT implementation specific. Service is generally available in NGN leveraging Customer Originated Trace (COT) or Malicious Call Identification (MCI) features. A customer who wants to trace the number of a harassing phone call uses this feature in a one-shot fashion. COT can either be executed mid-call, by flashing and dialling the COT activation code, or executed after a call by originating and dialling the activation code. The Malicious Call Identification feature enhances the COT capability.	Low	Future
104	<b>Wholesale Access :- Analogue Select Services-Recall, Call Hold &amp; Mid-Call Access to Services</b>	The recall facility enables users to place an existing call on hold, obtain secondary dial tone and make an enquiry call. It is an enabler for a number of other services e.g. Call Waiting, Three Party Call etc.		depends on architecture. Not available in native SIP. Low for H.248.	Line Control	Low	Same.	Low	Future
105	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Admin Call Barring</b>	For ICB the customer's line is configured to bar all incoming calls		Wholesale duplicate of service covered elsewhere	Call Server Feature	Low	Same.	Low	Future

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106	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Bar Use of 1471</b>	This is the CORE IN service version of 1471 that stores the CLI of the last 5 callers. Service announcements are played on the MAS-T equipment co-located with the CS.		Wholesale duplicate of service covered elsewhere	Call Server Feature	Low	Same.	Low	Future
107	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Bar use of Call Barring</b>	This is Outgoing Call Barring (OCB) category 4. Operator calls (100) and 118xxx (DQ) are barred but 999, 112, 150, 151, 152, 154 are allowed.		Wholesale duplicate of service covered elsewhere	Call Server Feature	Low	Same.	Low	Future
108	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Bar use of Call Return</b>	Sub Product Name incomplete. Therefore it is not certain exactly which barring variant is being referred to. However, all required ICB and OCB variants are known to be covered by Sep 06 delivery.		Wholesale duplicate of service covered elsewhere	Call Server Feature	Low	Same.	Low	Future
109	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Call Barring</b>	Service is covered by administration controlled & customer controlled incoming and outgoing call barring		Wholesale duplicate of service covered elsewhere	Call Server Feature	Low	Same.	Low	Future
110	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Call Barring (customer controlled)</b>	Service is covered by administration controlled & customer controlled incoming and outgoing call barring		Wholesale duplicate of service covered elsewhere	Call Server Feature	Low	Same.	Low	Future
111	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Call Diversion</b>	Customers may configure their lines to divert incoming calls to another destination of their choice. Diversion may be immediate or configured to work when the diverting line is busy or fails to answer an incoming call within a certain, administration set, period of time.		Wholesale duplicate of service covered elsewhere	Call Server Feature	Low	Same.	Low	Future
112	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Call Return</b>	Standard line service that permits the CLI of the last caller to be read out to the customer. Keying a '3' will then initiate a return call to the stored number		Wholesale duplicate of service covered elsewhere	Interworking	Medium	Same.	Medium	Future
113	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Call Return Erasure (1475)</b>	A facility whereby a user can erase details of the last incoming call stored by the 1471 Call Return service.		Wholesale duplicate of service covered elsewhere	Regulatory	Low	Same.	Low	Future
114	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Call Sign</b>	Additional numbers provided against a customer's line which, when called, apply a ringing cadence distinct from the cadence applied when the main number is called. Two additional cadences are available each requiring a dedicated Call Sign number associated with it.		Wholesale duplicate of service covered elsewhere	Call Server Feature	Low	Same. Generally available in industry a.k.a. Distinctive Ringing. The distinctive ringing with call waiting feature is highly dependent on the capabilities of the endpoint. For example, an advanced SIP endpoint provides the call waiting feature itself and although the Call Server sends a distinctive ringing indication to the endpoint, the endpoint can choose to use that information to apply the appropriate call waiting tone.	Low	Future

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115	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Call Waiting</b>	A service that enables a customer who is engaged on a call to be alerted, by means of in-band tones, to a subsequent call to his number. The customer may then ignore the call or accept the waiting call by using recall. If the waiting call is accepted the called user may toggle between the new call and the original call. The waiting call is played an announcement to indicate that the called number has been made aware of its existence.		Wholesale duplicate of service covered elsewhere	Call Server Feature	Low	Same.	Low	Future
116	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Caller Display</b>	A service whereby a called customer receives the telephone number of the caller on dedicated caller display enabled CPE. The information is sent over the called customer's line using V.23 FSK signalling. If the calling customer's telephone number is withheld or unavailable an appropriate text string is sent in its place.		Wholesale duplicate of service covered elsewhere	Call Server Feature	Low	Same.	Low	Future
117	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Caller Redirect / CNL</b>	Where a customer has had a change of number this facility may be provided against the vacated number to provide callers with an announcement advising them of the customer's new number. The service announcement is played from the MAS-T.		Wholesale duplicate of service covered elsewhere	Call Server Feature	Medium	Generally available in NGN. AKA Intercept Referral.The intercept referral feature plays an announcement that can supply a new or changed number when a call is received for a subscriber who has moved or changed numbers.	Low	Future
118	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Choose To Refuse</b>	A Core IN service enabling users to bar incoming calls from particular numbers. The service announcements are played from the MAS-T.		Wholesale duplicate of service covered elsewhere	ASP	High	Feature is generally available in NGN using enhanced Selective Call Rejection (SCR). Allow the SCR subscriber to enter a dialed code which causes the number of the last incoming call, if available, to be placed on the Selective Call Rejection Screening List.	Low	Future
119	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Choose to Refuse PIN Number Chan</b>	A Choose to Refuse service feature. The service interaction announcements are handled by the MAS-T.		Wholesale duplicate of service covered elsewhere	ASP	High	Feature is generally available in NGN using enhanced Selective Call Rejection (SCR). Allow the SCR subscriber to enter a dialed code which causes the number of the last incoming call, if available, to be placed on the Selective Call Rejection Screening List.	Low	Future
120	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- ICB</b>	Service covered by administration controlled and customer controlled ICB		Wholesale duplicate of service covered elsewhere	Call Server Feature	Low	Same.	Low	Future
121	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- OCB Debt Management</b>	Covered by the administration controlled OCB service. OCB features are impacted by FRN002.		Wholesale duplicate of service covered elsewhere	ASP	Low	Same.	Low	Future
122	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- OCB for Premium Rate Services an</b>	A Choose to Refuse service feature. The service interaction announcements are handled by the MAS-T.		Wholesale duplicate of service covered elsewhere	Call Server Feature	Low	Same.	Low	Future

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123	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Presentation Number</b>	An additional telephone number provided for interworking with CLI reporting services such as Caller Display and Return Call. Where a presentation number has been provided it will be displayed rather than the network/billing number associated with the calling line.		Wholesale duplicate of service covered elsewhere	Call Server Feature	Low	Same.	Low	Future
124	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Prompted Ring Back Removal</b>	Configuration of a line such that it receives standard busy tone rather than busy tone interspersed with a prompted ring back announcement when outgoing calls encounter a busy destination.		Wholesale duplicate of service covered elsewhere	Call Server Feature	Low	Same.	Low	Future
125	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Reminder Call</b>	Customers may use control codes to schedule a reminder call initiated from the network at a pre-determined time.	Line cct feature, Openreach delivered. Requires H.248 as it provides line control. Cannot be supported in SIP.	Wholesale duplicate of service covered elsewhere	Call Server Feature	Low	Same.	Low	Future
126	<b>Wholesale Access :- Analogue</b>	The pay-per-use aspect of the Reminder Call service is a feature of the billing system.		Wholesale duplicate of service covered elsewhere	N/A	Low	Same.	Low	Future
127	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Remote Call Forwarding (RCF)</b>	The WA version of RCF. See description in row Error! Reference source not found..		Wholesale duplicate of service covered elsewhere	Call Server Feature	Low	Same.	Low	Future
128	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Removal of Ring back</b>	Configuration of customers' lines such that the Ring Back When Free service is not available.	Check with John Morden. Requires VBD support. See text Direct for the issues. Done with IN and includes gaping controls.	Wholesale duplicate of service covered elsewhere	Call Server Feature	High	Same.	High	Future
129	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Ring Back Inhibit</b>	A terminating line service which denies callers the ability to set up a Ring Back When Free call to a busy line configured with the service. Callers who attempt to invoke RBWF receive a rejection announcement.		Wholesale duplicate of service covered elsewhere	Call Server Feature	High	Same.	High	Future
130	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Ring Back When Free</b>	On encountering a busy destination a user may enter a digit to invoke the Ring Back When Free service. When the previously busy destination becomes free, the original caller is automatically rung by the service. On answering this ring back, the caller is connected to the previously busy destination. Thereafter the call proceeds as a normal call.		Wholesale duplicate of service covered elsewhere	Call Server Feature	High	Same.	High	Future
131	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Smart Divert</b>	A service enabling customers to change the diversion type and destination of a line from a remote location. The user dials a telephone number that gives access to the Remote Control of Supplementary Services facility on the DLE/Call Server associated with the diverting line. The user is then able to set up or cancel diversion by use of the appropriate control codes. Operation of the service is protected by the use of a PIN as part of the control code sequence.		Wholesale duplicate of service covered elsewhere	Call Server Feature	Medium	Same.	Medium	Future

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132	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Smart Divert + Bypass Number</b>	A combination of the services described in rows 114 and 10.	Line reversal required and support for CPC Payphone.	Wholesale duplicate of service covered elsewhere	Call Server Feature	Low	Same.	Low	Future
133	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Smart Divert PIN Number Change</b>	A variant of Remote Control of Diversion service.		Wholesale duplicate of service covered elsewhere	Call Server Feature	Medium	Same. Reference to Feature # 132	Medium	Future
134	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Three Way Calling Access</b>	A facility whereby a customer engaged on a call can make an enquiry call to a third party. The customer then has the ability to toggle between the original call and the enquiry call or to connect all three parties in a conference. The controlling line may then release either or both of the other parties by means of control codes		Wholesale duplicate of service covered elsewhere	Call Server Feature	Low	Same.	Low	Future
135	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :-Anonymous Call Rejection</b>	A terminating line service whereby incoming calls from lines which have withheld their CLI are rejected. The withholding caller receives a network announcement to indicate the reason for the failure of their call. Incoming calls for which the CLI is unavailable for reasons other than being withheld by the caller are not blocked by this service.		Wholesale duplicate of service covered elsewhere	Call Server Feature	Low	Same.	Low	Future
136	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :Bar Use of 1470</b>	Lines can be configured such that the use of 1470 is unavailable to the user.		Wholesale duplicate of service covered elsewhere	Call Server Feature	Low	Same.	Low	Future
137	<b>BT MeetMe</b>	Conferencing products. Edge of network platform. Use basic call and sometimes number translation service for call set-up.		Duplicate	N/A	N/A	N/A	N/A	N/A
138	<b>BT MeetMe (UK/ROW)</b>	Conferencing products. Edge of network platform. Use basic call and sometimes number translation service for call set-up.		Duplicate	N/A	N/A	N/A	N/A	N/A
139	<b>Emergency Services 999 / 112</b>	Provides priority routing to BT emergency Operators.	for pstn replacement will need an alternative to IN.	High, if continuous retry is needed, also calling party held is not available in native SIP. Location is also not fixed, routing is complex, with high impact if wrong	Regulatory	High	Same. In some implementations, the NGN is required to interwork with assets in the PSTN that support emergency service and that are not replicated in NGN. For instance, Subs mapping to PSAP location function handled in NGN; then emergency calls are routed to PSAP using screening index.	High	Future
140	<b>Enterprise Solutions</b>	This is a managed conferencing service. The Conferencing platforms will remain located outside the 21C network during Pathfinder timescales.		Duplicate	N/A	N/A	N/A	N/A	N/A
141	<b>Platform Based Cashless Calling</b>	CPE provision/management related rather than 21C Voice functionality specific. Listed here for completeness but not explicitly covered within the scope of this particular design document.		N/A - CPE related	CPE	Low	Same.	Low	Future
142	<b>Platform Based Cashless Calling</b>	CPE provision/management related rather than 21C Voice functionality specific.		N/A - CPE related	CPE	Low	Same.	Low	Future

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143	Platform Based Cashless Calling	CPE provision/management related rather than 21C Voice functionality specific.		N/A - CPE related	CPE	Low	Same.	Low	Future
144	Platform Based Cashless Calling	CPE provision/management related rather than 21C Voice functionality specific.		N/A - CPE related	CPE	Low	Same.	Low	Future
145	Platform Based Cashless Calling	CPE provision/management related rather than 21C Voice functionality specific.		N/A - CPE related	CPE	Low	Same.	Low	Future
146	Platform Based Cashless Calling	CPE provision/management related rather than 21C Voice functionality specific.		N/A - CPE related	CPE	Low	Same.	Low	Future
147	BTnet Dial IP	A replacement version of Btnet for 21C application. Uses basic call and possibly number translation to route call.		VBD - irrelevant now?	VBD	High	Same.	High	Sunset
148	BT Yahoo! Consumer Narrowband-BT Yahoo! Anytime	Dial-up Internet access products with various facilities and charging options		VBD - irrelevant now?	VBD	High	Same.	High	Sunset
149	BT Yahoo! Consumer Narrowband	Dial-up Internet access products with various facilities and charging options		VBD - irrelevant now?	VBD	High	Same.	High	Sunset
150	BT Yahoo! Consumer Narrowband-BT Yahoo! PAYG	Dial-up Internet access products with various facilities and charging options		VBD - irrelevant now?	VBD	High	Same.	High	Sunset
151	BT Yahoo! Consumer Narrowband-BT Yahoo! Surftime (Evening and Weekend)	Dial-up Internet access products with various facilities and charging options		VBD - irrelevant now?	VBD	High	Same.	High	Sunset
152	BT Yahoo! Consumer Narrowband-BT Yahoo! Surftime 24/7	Dial-up Internet access products with various facilities and charging options		VBD - irrelevant now?	VBD	High	Same.	High	Sunset
153	Business Connect Anytime	Dial-up Internet access products with various facilities and charging options		VBD - irrelevant now?	VBD	High	Same.	High	Sunset
154	Business Connect Anytime-Business Connect LAN	Dial-up Internet access products with various facilities and charging options		VBD - irrelevant now?	VBD	High	Same.	High	Sunset
155	Business Connect Anytime-Business Connect PAYG	Dial-up Internet access products with various facilities and charging options		VBD - irrelevant now?	VBD	High	Same.	High	Sunset
156	Basic Voice Calls-Originating Value calls	Basic call to number translation ASP (0800 & 0845 numbers).		low - call routing	Call Server Routing	Low	Same.	Low	Future
157	Basic Voice Calls-Other originating (non-geo) trunk calls	Basic call to number translation ASP (0870 & Premium rate numbers).		low - call routing	Call Server Routing	Low	Same.	Low	Future
158	BT Genesys	IN based call delivery system for Inbound Services. Similar to the ICM [Intelligent Contact Manager].		N/A Withdrawn	N/A	N/A	N/A	N/A	N/A
159	Call Minder	Need to support DPNSS1 MWI		High - MWI is currently DPNSS based for legacy	ASP	High	Same. Voicemail service with RBWF feature. BT Call Minder is a multi-feature answering service that lets you retrieve messages from any phone, anywhere. If you miss a call because you're on the phone or Internet, BT Call Minder will take a message and ring you shortly after you've hung up or logged off and tell you that you have a message. Implementation requires DPNSS encapsulation in SS7, with MWI feature.	High	Future



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160	<b>Call Waiting</b>	A service that enables a customer who is engaged on a call to be alerted, by means of in-band tones, to a subsequent call to his number. The customer may then ignore the call or accept the waiting call by using recall. If the waiting call is accepted the called user may toggle between the new call and the original call. The waiting call is played an announcement to indicate that the called number has been made aware of its existence.		Low with H.248 line control. Medium with SIP (ATA feature).	Call Server Feature	Low	Same.	Low	Future
161	<b>Complex routed Calls (NP, NTS, Transit and CPS)</b>	Complex routed calls for Number Portability, Number Translation Services, Transit and Carrier Pre Selection. See also details in individual service-specific rows.		duplicate	N/A	N/A	N/A	N/A	N/A
162	<b>FRIACO</b>	Allows OCPs to offer unmetered (0808) dial-up Internet access to BT retail customers at (former) Digital Local Exchange (DLE) level. For Pathfinder, the Call Server routes calls to an NGS, and this triggers to the IN for number translation purposes.	Check with John Morden. Requires VBD support. See text Direct for the issues. Done with IN and includes gapping controls.	High if needed,	VBD	High	Same. Better HSI substitute in NGN.	High	Sunset
163	<b>ICM (Intelligent Call Manager)</b>	The Intelligent Contact Manager (ICM) is an IN component seved from the legacy which manages the queuing/distribution of calls to Call Centres and Call Agents, and the involvement of Voice Response Units (VRUs). ICM calls from Pathfinder are routed by the Call Server to an appropriate NGS in the legacy, which then triggers to the ICM. The ICM then controls access to a VRU and or the Call Centre destination as required.		IN service in BT	ASP	High	Same.	High	Future
164	<b>Inbound Calls-Advanced Services</b>	Advanced Features are a range of network-based features offering additional functionality to BT Inbound Services calls, e.g. Geographic Routing, Time of Day Routing etc. This functionality is implemented on the ASP. The ASP is a number of platforms, eg RIDE, Call Minder and the Intelligent Networks.		IN service in BT	ASP	High	Same.	High	Future
165	<b>Inbound Calls-Freefone 0800</b>	BT Freefone 0800/0808 service enables callers to contact a business free of charge from anywhere in the UK.	for pstn replacement will need an alternative to IN.	Need an IN or some value added service node,	ASP	High	Same. BT may consider developing interworking capabilities between the IN and NGN, as opposed to replicating IN in NGN. IN Interworking option still requires high investments.	High	Future
166	<b>Inbound Calls-Freefone Validation</b>	A credit card validation product based on the use of a freefone call.		IN service in BT	ASP	High	Same. BT may consider developing interworking capabilities between the IN and NGN, as opposed to replicating IN in NGN. IN Interworking option still requires high investments.	High	Future
167	<b>Inbound Calls-Lo-call 0845</b>	BT Lo-call 0845 service enables callers to contact a business at the same cost as a local call from anywhere in the UK.		see Freefone 0800 above	ASP	High	Same. BT may consider developing interworking capabilities between the IN and NGN, as opposed to replicating IN in NGN. IN Interworking option still requires high investments.	High	Future

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168	Inbound Calls-National call / ContactCall / ValueCall 0870 / 0871 / 0844	BT NationalCall 0870 service means that callers from anywhere in the UK pay the entire cost of the basic call; the business receiving the call pays nothing towards the cost.		see Freephone 0800 above	ASP	High	Same. BT may consider developing interworking capabilities between the IN and NGN, as opposed to replicating IN in NGN. IN Interworking option still requires high investments.	High	Future
169	Intelligent network services BT Bill Direct	Registered callers prefix calls from any line and the all calls are billed to the registered customer or their company and not the line they called from. Calls are triggered to the CORE IN from an NGS		IN service in BT	ASP	High	Same. BT may consider developing interworking capabilities between the IN and NGN, as opposed to replicating IN in NGN. IN Interworking option still requires high investments.	High	Future
170	Access to DQ	118 access product for downstream DQ services	Call routing capability. No special requirement.	Low.	Call Server Routing	Low	Same.	Low	Future
171	NIVR	Network based IVR used in conjunction with Inbound Services (ICM, etc.)		Medium -need an IVR	ASP	Medium	Same.	Medium	Future
172	Number Translation Services (NTS) Origination-BT - OLO Surftime	IN service		Basic number translation. Will need IN or equivalent or call server based solution. Service management means this is high if we don't retain the IN.	ASP	High	Same.	High	Future
173	Number Translation Services (NTS) Origination-Direct to Freephone (BT-OLO)	IN service	PRA for Audiotext; Very high call volume; Short calls; Televoting	As above	ASP	High	Same.	High	Future
174	Number Translation Services (NTS) Origination-Direct to LRCS (OLO-BT)	IN service		As above	ASP	High	Same.	High	Future
175	Number Translation Services (NTS) Origination-Direct to National Call (OLO-BT)	IN service	if WLR is maintained then routing is based on the WLR operator	As above	ASP	High	Same.	High	Future
176	Number Translation Services (NTS) Origination-Direct to Other (OLO-BT)	IN service	UK NICC standard exists for SIP access but not implemented without softswitch development. No standard for SIP interconnect / trunk	As above	ASP	High	Same.	High	Future
177	Number Translation Services (NTS) Origination-Direct to PRS (OLO-BT)	IN service		As above	ASP	High	Same.	High	Future
178	Number Translation Services (NTS) Origination	IN service		As above	ASP	High	Same.	High	Future
179	Ring Back	On encountering a busy destination a user may enter a digit to invoke the Ring Back When Free service. When the previously busy destination becomes free, the original caller is automatically rung by the service. On answering this ring back, the caller is connected to the previously busy destination. Thereafter the call proceeds as a normal call.		duplicate	N/A	N/A	N/A	N/A	N/A

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180	Wholesale Line Independent	Wholesale line independent service		Service wrap feature - but has slightly different configurations per CP - medium	Interconnect	Medium	Same.	Medium	Future
181	ValueLink & E/MCD	Enhanced Mid Call Diversion (EMCD) is a feature on Enhanced ValueLink. The EMCD capability means that a caller to a Service Provider (e.g. an information service) can be diverted to a second destination.	PRA for Audiotext; Very high call volume; Short calls; Televoting; UK specific; Growth on existing only	ISDN and customer impacting high to replicate - explicit call diversion on PRI	ISDN	High	Same.	High	Transitional
182	BT Answer 1571	Call Minder is a call answering and message storage service implemented on a remote ASP. It provides customers with voice-mail facilities associated with their PSTN line. The service makes use of administration controlled diversion on busy and diversion on no reply facilities to direct calls to the ASP. The service also uses DPNSS1 signalling encapsulated in SS7 IUP NEED and/or ISUP APM messages to indicate message waiting and control of diversion on no reply timers.	Requires V.23 FSK signalling from the line cct. Requires provisioning in the ATA. Need functionality to convert the CLI from International format to national format.	Voice messaging - Low - service impact	ASP	Low	Same.	Low	Future
183	BT Answer 1571-BT Answer Plus 1571 with Message Alert	Call Minder Service Variant implemented on Call Minder ASP		Voice messaging - Low - service impact	ASP	Low	Same.	Low	Future
184	Call Mapping - C7 Variant	Call Mapper allows calls to be directed to 3rd party mailboxes and for customer message retrieval from such mailboxes. This is an alternative to using the BT Call Minder platform.	Requires routing to an IDD gateway based upon country code. Also variable number lengths incurring additional PDD.	Wholesale access to 3rd party VM platforms, low usage. Call Routing - Low	Interconnect	Low	Same.	Low	Future
185	Custodial Tagging Line-Ring Back When Free	On encountering a busy destination a user may enter a digit to invoke the Ring Back When Free service. When the previously busy destination becomes free the original caller is automatically rung by the service; on answering the ring back (with special cadence) the caller is connected to the previously busy destination. Thereafter the call proceeds as a normal call.		Duplicate	N/A	N/A	N/A	N/A	N/A
186	Indirect Access Call Barring	IACB is provided if required on WA lines to prevent indirect access codes being used to connect via other Service Providers.	Call routing capability. No special requirement,	Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future
187	TOS-Temporarily Out of Service (TOS)	The temporary removal of all incoming and outgoing service on a line including 999/112 calls. Originally used as a response to non-payment of bills, but now generally provided at customer request only.		Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future
188	Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- 1471 Extra	This is the CORE IN service version of 1471 that stores the CLI of the last 5 callers. Service announcements are played on the MAS-T equipment co-located with the CS.		Wholesale duplicate of service covered elsewhere	ASP	Medium	Same.	Medium	Future
189	Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Call Minder	Need to support DPNSS1 MWI		Wholesale duplicate of service covered elsewhere	ASP	Low	Same.	Low	Future

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190	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Ring Back</b>	On encountering a busy destination a user may enter a digit to invoke the Ring Back When Free service. When the previously busy destination becomes free, the original caller is automatically rung by the service. On answering this ring back, the caller is connected to the previously busy destination. Thereafter the call proceeds as a normal call.		Wholesale duplicate of service covered elsewhere	Call Server Feature	High	Same.	High	Future
191	<b>Wholesale Access :- Analogue Select Services-Wholesale Access Feature :- Wholesale 1571</b>	Need to support DPNSS1 MWI	Requires routing to the WLR provider for the line if the customer dials a chargeable number. Done via the IN. Requires an IN? Per customer profiles.	Wholesale duplicate of service covered elsewhere	ASP	Low	Same.	Low	Future
192	<b>Wholesale Web Call Connect</b>	Ability for 3rd party to initiate a call		Wholesale duplicate of service covered elsewhere	N/A	N/A	N/A	N/A	N/A
193	<b>Operator Assistance</b>	This product caters for assistance, operator connected, & reverse charge calls, etc. The operator clearing program (manual hold) may apply on such calls.	if WLR is maintained then routing is based on the WLR operator. No commercial driver	origin based routing . Medium, bespoke routing solution.	Call Server Routing	High	Same.	High	Transitional
194	<b>Malicious call intercept</b>	Ability for customer selectively to forward a call to a 3rd party Eg. Operator. Ability to trace the source of a malicious call	Openreach provide this capability on legacy.	Call Server Feature - Low	Call Server Feature	Low	Same.	Low	Future
195	<b>Malicious call trace</b>	Ability for customer selectively to forward a call to a 3rd party Eg. Operator. Ability to trace the source of a malicious call	GS provide this capability on legacy.	Mid call trigger of diversion - high for SIP - low with H.248	Call Server Feature	Low	Same.	Low	Future
196	<b>Pre-standard overlap sending</b>	Numbers can be sent one at a time until the network detects it has a valid or invalid number against pre-defined digit maps and dial plans	UK NICC standard exists for SIP access but not implemented without softswitch development. No standard for SIP interconnect / trunk	High - performance impact.	Line Control	High	See Feature #45.	Medium	Future
197	<b>Basic Voice Calls-International</b>	Basic call functionality		duplicate	Call Server Routing	Low	Same.	Low	Future
198	<b>BT Pay&amp;Call</b>	Pre-paid fixed line service. Uses the 'Montrose' IN platform. The service will trigger at the CS but the announcements for Pay and Call are delivered from nodes located in the PSTN via service addressed calls.		Withdrawn	ASP	High	Same.	High	Sunset
199	<b>BT Text</b>	Text messaging to and from fixed lines. Uses caller display FSK signalling to initiate an answer from the SMS enabled CPE but actual text message is delivered in band, using FSK signalling, from a remote SMS service platform	See Text Direct.	Duplicate	ASP	High	Same. Better substitute in NGN.	High	Sunset
200	<b>BT Text-Customer opt out of TTS delivery</b>	BT Text service variant handled by SMS platform	bespoke development for COT on last answered call	service wrap only	ASP	Low	Same.	Low	Future
201	<b>BT Text-Customer registered for BT Text</b>	BT Text service variant handled by SMS platform		service wrap only	ASP	Low	Same.	Low	Future
202	<b>Call Minder-Call Minder Extensions</b>	Call Minder platform feature		VM platform feature - low	ASP	Low	Same.	Low	Future
203	<b>Call Minder-Call Minder Premier</b>	Call Minder platform feature		VM platform feature - low	ASP	Low	Same.	Low	Future

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204	<b>Called Party Answer</b>	CSA line reversal for analogue DELs. This is a configurable feature and may be used by call logging equipment, payphones, PBXs etc, to detect when the terminating end of a call has answered.	Line cct feature, Openreach delivered. Requires H.248 as it provides line control. Cannot be supported in SIP.	Low with H.248 line control. Medium with SIP line control.	Line Control	Low	Same.	Low	Future
205	<b>BT Answer 1571-BT Answer Plus 1571 with Personalised Greeting</b>	Call Minder platform feature		VM platform feature - low	ASP	Low	Same.	Low	Future
206	<b>Payphone Line (with &amp; without cuckoo tone)</b>	Payphone line requires line reversal and CPC support in the exchange data. Different call barring categories also exist.	Line reversal required and support for CPC Payphone.	Low with H.248 line control. Medium with SIP line control.	Regulatory	Low	Same.	Low	Future
207	<b>Public Kiosk Estate-Advertising</b>	All Public Kiosk Estate sub products are CPE provision/management related rather than 21C Voice functionality specific. Listed here for completeness but not explicitly covered within the scope of this design document		N/A	N/A	N/A	N/A	N/A	N/A
208	<b>Public Kiosk Estate-ATM</b>	All Public Kiosk Estate sub products are CPE provision/management related rather than 21C Voice functionality specific. Listed here for completeness but not explicitly covered within the scope of this design document		N/A	N/A	N/A	N/A	N/A	N/A
209	<b>Public Kiosk Estate-Monitoring</b>	All Public Kiosk Estate sub products are CPE provision/management related rather than 21C Voice functionality specific. Listed here for completeness but not explicitly covered within the scope of this design document		N/A	N/A	N/A	N/A	N/A	N/A
210	<b>Public Kiosk Estate-reach /Wi-</b>	All Public Kiosk Estate sub products are CPE provision/management related rather than 21C Voice functionality specific. Listed here for completeness but not explicitly covered within the scope of this design document		N/A	N/A	N/A	N/A	N/A	N/A
211	<b>Public Kiosk Estate-Vending</b>	All Public Kiosk Estate sub products are CPE provision/management related rather than 21C Voice functionality specific. Listed here for completeness but not explicitly covered within the scope of this design document		N/A	CPE	N/A	N/A	N/A	N/A
212	<b>Single Line PBX Line Reversal</b>	Could be a "productisation" of the practice of providing a single line PBX where the customer required CSA line reversal e.g. for a private payphone; prior to the introduction of CSA line reversal for DELs.		Duplicate (called party answer)	Call Server Fe	Low	Same.	Low	Transitional
213	<b>Operator Assistance-Intelligent Network Services Operator Call Steering</b>	This IN feature presents a caller with the following user-selectable options rather than immediately connecting to an Operator. These options are:  1. Directory enquiry information; 2. Check line or report faults; 3. Sales, Service or Billing enquiries; 4. Book alarm call or speak to an Operator		complex routing implemented in IN in BT. High to replicate on switch	ASP	High	Same. Related to Feature #193. Might require IN triggering	High	Transitional

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214	<b>Operator Assistance-Operator Override</b>	This feature allows an operator to interrupt calls but is stated as being no longer used due to privacy issues. However its ROP status is understood to assume that its migration to 21C is a regulatory requirement.		Very High - not required now?	Call Server Fe	High	Same. See Feature #193, 213.	High	Transitional
215	<b>Paging Interconnect</b>	Radio Paging interconnect product using DASS ISDN 30.	UK specific; Growth on existing only	call routing and interconnect product - issue is replacement of ISDN 30. High development but low impact	ISDN	High	Same. See Feature #193, 213.	High	Transitional
216	<b>Virtual Interconnect Extension Circuits (VIEC)</b>	Virtual IECs are used in 21C to replace the physical Interconnect Extension Circuits used in the legacy between OCPs and BT DLEs. The VIEC concept allows former OCP-DLE interconnect charging to be accommodated within the OCP-NGS interconnect arrangements applicable in 21C. To permit this function signalling is being enhanced to send a customer's original area code from the CS to the NGS where the NGS can then know which VIEC to connect the Customer with.	Call routing capability. No special requirement,	Migration service. High as it depends on DLE based routing	Interconnect	High	Same. See Feature #193, 213.	High	Future
217	<b>New Wave - Private Kiosk-Data</b>	CPE provision/management related rather than 21C Voice functionality specific. Listed here for completeness but not explicitly covered within the scope of this particular design document.		N/A	CPE	Low	Same.	Low	Transitional
218	<b>New Wave - Private Kiosk-ePay</b>	CPE provision/management related rather than 21C Voice functionality specific. Listed here for completeness but not explicitly covered within the scope of this particular design document.		N/A	CPE	Low	Same.	Low	Transitional
219	<b>New Wave - Private Kiosk-Multi</b>	CPE provision/management related rather than 21C Voice functionality specific. Listed here for completeness but not explicitly covered within the scope of this particular design document.		N/A	CPE	Low	Same.	Low	Transitional
220	<b>New Wave - Private Kiosk-Other</b>	CPE provision/management related rather than 21C Voice functionality specific. Listed here for completeness but not explicitly covered within the scope of this particular design document.		N/A	CPE	Low	Same.	Low	Transitional
221	<b>Private Payphone Apparatus - C50/C100/C200/C300</b>	CPE provision/management related rather than 21C Voice functionality specific. Listed here for completeness but not explicitly covered within the scope of this particular design document.		N/A	CPE	Low	Same.	Low	Transitional
222	<b>Private Payphone Apparatus - P290/P390/P490/ P2000</b>	CPE provision/management related rather than 21C Voice functionality specific. Listed here for completeness but not explicitly covered within the scope of this particular design document.		N/A	CPE	Low	Same.	Low	Transitional

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223	Public Payphone Apparatus - P2000	CPE provision/management related rather than 21C Voice functionality specific. Listed here for completeness but not explicitly covered within the scope of this particular design document.		N/A	CPE	Low	Same.	Low	Transitional
224	Public Payphone Apparatus - P390/P490	CPE provision/management related rather than 21C Voice functionality specific. Listed here for completeness but not explicitly covered within the scope of this particular design document.		N/A	CPE	Low	Same.	Low	Transitional
225	Public Payphone Apparatus - SM1 Paychoice	CPE provision/management related rather than 21C Voice functionality specific. Listed here for completeness but not explicitly covered within the scope of this particular design document.		N/A	CPE	Low	Same.	Low	Transitional
226	Public Payphone Apparatus - Sovereign Textphone	CPE provision/management related rather than 21C Voice functionality specific. Listed here for completeness but not explicitly covered within the scope of this particular design document.	Duplicate	N/A	CPE	Low	Same.	Low	Transitional
227	224 accreditation	Security accreditation to enable confidential government voice communications		N/A	Regulatory	N/A	N/A	N/A	N/A
228	Connection Admission Control (CAC)	Ability to limit calls according to available bandwidth for the media		Depends on architecture - SIP is low as its an SBC feature, H.248 is medium.	Call Server Feature	Medium	Function generally available on access SBC and MSAN.	Low	Future
229	Geographic resilience (nodal resilience)	Ability to have fast back up to a remote call server under local nodal failure		Medium- easier on NGN than TDM network.	Call Server Feature	Medium	Same.	Medium	Future
230	Gov Telephony Preference Scheme (GTPS)	Ability to only allow specific customers to use telephony network in National emergency conditions	No commercial driver.	High	Regulatory	High	Same. Country Specific implementation. Solutions available in NGN might require customization.	High	Future
231	Operator hold (Calling Subscriber Hold)	Manual hold solution needs to be assessed by BT specialists		High, bespoke solution, not possible with native SIP	Call Server Feature	High	Same.	High	Future
232	Overload controls (mass call events)	When a mass calling event is triggered, network must reduce calling rates to stop general network congestion		High, need to distribute the controls, depends on architecture	Call Server Feature	High	Same.	High	Future
233	Special measures for end-users with disabilities (Text Relay)	Uses the Text Direct platform	See Text Direct.	See Text Direct	Call Server Feature	High	Same.	High	Future
234	User/call priority features (military)	Ability to allow calls only from pre-specified lines eg. military, ambulance police under emergency situations		duplicate	N/A	N/A	N/A	N/A	N/A