4.) The situation with the availability of CIC information in SS7 is as follows:

- TR 394 originally included the transmission of CIC information.

- In 1986, T1X1.1 reviewed this and determined that the transmission of the CIC was not needed beyond the last switch in the originating LATA (End Office or Access Tandem). MCI was a participant in these proceedings.

If MCI would like to have this pursued and incorporated into TR 394 then the following steps are necessary:

- Request the service from Bell Atlantic.

- Bell Atlantic will propose a new service (CIC Information) and service definition and refer it to Bellcore for input into TR 394.

  -- Impact will most likely be seen in 1991-92.

Hopefully, this responds to those questions remaining from our meeting of April 25, 1988. If you have any additional questions, please give me a call.

Sincerely,

Calvin S. Twyman

(for) Bob Ingalls

cc: Wade Wallace
Woody Traylor
Jim Vecchiola

BellSouth Services

100 Chase Park South
Birmingham, Alabama 35244

January 20, 1988

Mr. Peter Guggina
MCI Telecommunications
8283 Greensboro Drive
McLean, VA 22102

Dear Peter:

This is in response to your letter of January 11, 1988 regarding provision of Carrier Identification Code (CIC) information with Automatic Number Identification (ANI) on Feature Group D (FG-D).

Our existing technology does not permit transmission of CIC over FG-D, whether direct-or tandem-routed. Implementing such a capability would involve first preparing detailed design specifications, then having all our end office switch suppliers develop the feature per the specification. Our experience is that this process typically requires over two years to complete.

Sincerely,

Joseph R. Loggins
Operations Manager

cc: D. W. Jones
R. B. Robertson
W. H. McElveen
A. P. Jones
R. B. Vogel

BellSouth Services

W. H. McElveen, Jr., P.E.
[illegible] President—
[illegible] Provisioning

100 Chase Park South
Birmingham, Alabama 35244
205 985-8261

[illegible]

May 6, 1988

MAY 10 1988

Shekhar Tiwari
MCI Telecommunications Corporation
8283 Greensboro Drive
McLean, VA 22102

SHEKHAR TIWARI
Technical Strategy Manager
MCI

Dear Mr. Tiwari:

This is in response to your inquiry about our willingness to transmit the Carrier Identification Code (CIC) as part of the ANI stream on originating FG-D calls.

Our investigation indicates that feature development would be required in the DMS-10, No. 1A and 5 ESS switching systems to implement your request. We understand, however, that a feature to equip the DMS-100/200 with the desired capability may already exist. Before we carry our investigation further and undertake activating and testing the feature, BellSouth needs to know whether MCI would still want to receive CIC codes from DMS-100 end offices and DMS-200 access tandems only.

We also understand that one Region is testing an arrangement in which direct trunks are entered in translations as tandem trunks so the end office will transmit the desired CIC. Our analysis indicates that this could only be accomplished on direct groups and that these would have to be further restricted to originating traffic only due to problems with recording in the terminating direction. BellSouth needs to know whether MCI would want the requested capability under those restrictions.

I encourage you to involve BellSouth's Account Executives, Larry Scherer and Phillip Burriss on 205-321-5257 and 404-529-5626 respectively. With a thorough understanding of your needs, they may be able to offer innovative solutions and more thoroughly represent your interests in internal feature development prioritization and future service offerings.

Harry McElveen

Central Telephone Company

O'Hare Plaza
8725 Higgins Road
Chicago, IL 60631
Telephone 312 399 2500

CENTEL

January 25, 1988

Mr. Peter Guggina
MCI Telecommunications Corporation
8283 Greensboro Drive
McLean, Virginia
22102

Dear Mr. Guggina:

In response to your letter of January 11, 1988, to James W. Weith, our access tandem and class five Equal Access Switches do not have the ability to forward Carrier Identification Code (CIC) information with Automatic Number Identification (ANI) on domestic calls, in either direct or access tandem trunking arrangements.

The manufacturers of these switches confirm this inability and indicate no immediate plans for such capabilities.

Should you have any questions, please advise.

Sincerely,

G. R. Church
General Staff Manager
Network & Switching

GRC:FJW:efb

cc: J. W. Weith

Contel Service Corporation
245 Perimeter Center Parkway
P. O. Box [illegible]
Atlanta, GA 30341
[illegible]

CONTEL

Peter Guggina
MCI
8283 Greensboro Drive
McLean, VA 22102

February 1, 1988

Dear Mr. Guggina:

I would like to respond to your request for planning information concerning the possibility of receiving Carrier Identification Code (CIC) information with the Automatic Number Identification (ANI) on Feature Group D (FGD) originating access service.

With the current switch software and the current feature description of Feature Group D (TR-NPL-000258), it is not possible for Contel switching systems to forward the CIC code to the carrier. This restriction applies to both direct and access tandem routed calls. This inability is a function of feature design and is not an administrable option available to Contel.

The only available method of implementing your request is to change the requirements of the LSSGR and the technical specifications for Feature Group D. This would, in turn, allow the switch vendors to provide the appropriate switch software.

If you have any further questions please contact me.

Bud Zirkle
Director - Network Operations

GTE Service Corporation

January 25, 1988

Mr. Peter Guggina
MCI Telecommunications Corporation
8283 Greensboro Drive
McLean, VA 22102

Dear Mr. Guggina:

Carrier Identification Code (CIC) tables are a generic data base feature in Equal Access End Office (EAEO) switching systems utilized to determine call routing for direct trunking arrangements, and is only forwarded (to "the" designated serving access tandem) when access tandem trunking arrangements have been specified for a particular CIC.

CIC information was a LEC specified feature to enable calls to be routed to the designated carrier. We did not envision a requirement to forward CIC information to carriers and, therefore, did not specify the capability be provided by our switching system vendors.

Should you have any remaining questions or wish to discuss this matter further, please call me at (214) 453-4824.

Sincerely,

WILLIAM E. MAFADINI
Manager - Switching Support

WEM/cmj/1062P

Attachment

cc: R. F. Clark
C. D. Zaretki
C. E. Flem
J. T. Sorenson

NYNEX Service Company
1155 Avenue of the Americas, New York, NY 10036
(212) 391-8750

T P Marshall
Managing Director

NYNEX
Service Company

February 9, 1988

Mr. Peter Guggina
MCI Telecommunications Corporation
8283 Greensboro Drive
McLean, Virginia 22102

Dear Mr. Guggina:

This is in response to your letter of January 11, which I regrettably did not receive until February 2. In that letter you questioned the feasibility of transmitting Carrier Identification Code (CIC) information over Feature Group D trunks. In the current signaling protocol for FGD trunks, the CIC is used exclusively for routing calls to the designated Interexchange Carrier.

For calls routed to a carrier via an access tandem, the originating end office specifies to the tandem the IC to which the call must be routed through a signaling sequence preceding the calling number identification field. This allows the access tandem to select the appropriate IC trunk group before the ANI information is sent, and the CIC information, having performed its function, is no longer available.

Calls routed directly from an originating end office to an IC do not require any further IC identificaton once the specific trunk group is selected. The end office having used the dialed 10XXX digits to determine call routing, thereupon "discards" the CIC information before ANI information is forwarded to the selected IC.

A requirement for CIC transmission as described in your letter would require significant changes in the existing switching generic. If the feature in question is only of interest to MCI, the generic would be rendered even more complex and the developmental and implementation costs increased commensurately.

NYNEX has been waiting for some time for features in developmental queue which have high priority for NYNEX, MCI and the industry as a whole. It would be unrealistic to assume that a generic change to accommodate CIC transmission, even if investigation proved it feasible, could be introduced in the near future. MCI may wish to consider other alternatives, such as dedicated trunk groups for specific CICs.

We are available to discuss the matter further and to assist in developing alternate solutions should you wish to pursue the problem with us. In any case, if you have any additional questions, please do not hesitate to contact me.

Sincerely,

TPMarshall

cc: Mr. F. Ferrantelli

NYNEX Service Company
[illegible]

William G LaPerch
[illegible]

NYNEX
Service Company

July 18, 1988

Mr. Peter Guggina
MCI Telecommunications Corporation
8003 Westpark Drive
McLean, VA 22102

Dear Mr. Guggina,

Approximately six weeks ago you inquired about the possibility of NYNEX forwarding CIC information with ANI on FG-D originating service. Attached you will find a reply from our technical planning group relative to this request

Despite the bleak outlook for providing this service quickly, I would be more than happy to pursue this further with you if appropriate. Please do not hesitate to call me if I can be of further help.

Sincerely,

W.G. LaPerch
Director, MCI Account

July 18, 1988

W.G. LaPerch, Director, MCI Account

Bill,

This is in reply to your letter regarding the forwarding of the Carrier Identification Code (CIC) information with the Automatic Number Identification (ANI) on Feature Group D originating access service.

Presently, in the FG D signalling protocol, the CIC code is used exclusively for routing to the proper Interexchange Carrier.

For calls routed via the access tandem, the end office identifies the IC to which the call must be routed in a signaling sequence preceeding the calling number identification field. This allows the access tandem to select the proper IC trunk group before the ANI information is sent. The CIC information which was sent to the access tandem, having performed its function, is no longer available.

Calls routed directly from the end office to the IC do not require any further IC identification once the specific IC trunk group is selected so the CIC is not forwarded. The end office uses the dialed 10XXX for this routing and the CIC is then no longer available.

Informal discussions with our switch vendors has confirmed that none of our switches has the capability to pass on the CIC as a part of the ANI. This requirement, if requested by MCI would require a change in the local switching generic requirements which now exist and require a major development. The vendors would not provide any specific cost estimates without a detailed requirement but generally feel it would be a major development and this would be reflected in both the time and cost of development.

If the feature is only applicable to MCI and not the general IC community it would further complicate the generic as well as increase the potential cost to the customer. In addition, we have been waiting for 18-24 months for many features which have high priority for both NYNEX, MCI, and the industry as a whole. It would be unrealistic to believe that this type of generic change, if technically feasible, could be done any sooner.

I would recommend that MCI make their interest in this feature known to those parties who are involved in the development of the Signaling System 7 protocol which is now emerging.

I am sorry to be so general in my reply but without specific requirements it is difficult to provide you with anything more than general replies.

Frank

F.J. Ferrantelli

Southwestern Bell
Telephone

February 10, 1988

Mr. Peter Guggina
MCI Telecommunications Corp.
8283 Greensboro Drive
McLean, Virginia 22102

Dear Mr. Guggina.

This is in response to your letter of January 11, 1988 in which you requested certain information concerning provision of the Carrier Identification Code (CIC) with ANI on FG D exchange access service.

The CIC is not contained in the protocol forwarded to inter-exchange carriers utilizing originating FG D exchange access for domestic calls (reference TR-NPL-000258, Issue 1, pages 3-2 and 3-10). This applies to both direct and tandem connections.

For 1+ MTS traffic, the appropriate CIC is determined from either the translations associated with the presubscribed line or the CIC dialed by the customer via the 10XXX instruction which "overrides" the presubscribed carrier on a per call basis. The EC switching offices utilize the CIC to determine (via the "carrier common block" translations) the appropriate trunk group over which to route the traffic in order to deliver the call to the appropriate interexchange carrier. This determination is made at the end office (EO) for direct trunking or the access tandem (AT) for tandem-routed calls. In no case, however, is the CIC contained in the protocol forwarded on domestic calls to the IC from the EO or the AT. (The CIC is, however, forwarded to the IC on international calls - see TR-NPL-000258, Issue 1, pages 3-2 and 3-11).

I hope this answers your question. Please let me know if clarification is needed. (Reference document TR-NPL-000258 has other information regarding signaling which may be helpful as well).

Sincerely,

Southwestern Bell Telephone

Alan Backof

208 S. Akard Room [illegible]
Dallas, Texas 75202
Phone (214) 464-[illegible]

May 23, 1988

Mr. Peter Guggina
MCI Telecommunications
8283 Greensboro Drive
McLean, Virginia 22102

Dear Peter:

Pursuant to our recent conversation it would be helpful if you would provide information on the following areas of CIC transmission:

1) Is this a service that MCI definitely plans on using in the future;

2) What is MCI's willingness to utilize this service if it were a tariff offering;

3) How would MCI like to see this service offered by Southwestern Bell;

4) How does MCI intend to utilize this service?

Any input you could provide would be helpful to Southwestern Bell's Business Opportunity Analysis procedure which has been initiated to study this request.

As we also discussed, this information is technically feasible on a direct basis while requiring development on a tandem basis. The time necessary for this development would be determined in conjunction with our vendors, but would certainly be impacted by the level of interest expressed by our customers.

As more information becomes available, I will keep you advised. If you have any questions, please contact me. I will be looking forward to your reply.

Sincerely,

Alan W Backof

Carrier Marketing
[illegible]
[illegible]
[illegible] 896-2866

Vern Braaksma
Regional Account Manager
[illegible]

March 28, 1988

Mr. Peter Guggina
Senior Manager
MCI Telecommunications Corporation
8283 Greensboro Drive
McLean, Virginia 22102

Dear Mr. Guggina,

In response to your letter regarding the possibility of providing the Carrier Identification Code (CIC) from end offices and tandems on originating Feature Group D (FG D) service, the following information has been obtained.

The CIC may be transmitted with Automatic Number Identification (ANI) via direct trunking to an end office. It is not possible at this time, however, to provision this service from any of the tandems in place within U S West. The ability to provide this service from the tandems would require software development and deployment by the vendor of each type of tandem switch.

A significant number of the MCI FG D trunking arrangements in place within U S West are direct arrangements. In addition, the end offices served by these direct trunks are often the ones which serve MCI's largest customers. Even though it is not possible to provide the CIC from the tandems, it may be possible to accomodate the needs of your marketing group and many MCI customers with direct trunking.

If you do see a requirement for the CIC from the tandems at some point in the future, we would be happy to talk with you more about this as well as the provisioning of the CIC on direct trunks. Please keep in mind that it is estimated that the development of the ability to provide this service from the tandems will be, quite expensive and will take some time to initate and deploy.

I apologize for the fact that we were so long in resonding to your letter. If we can provide additional information or you would like to discuss this further, please call me or Ceil Matson. I may be reached on (303) 896-2866 and Ceil on (303) 896-6790.

Sincerely,

VERN

Vern Braaksma

Copies to: Frank Karash, MCI
Margaret Bumgarner, U S West
Jerry Sundby, U S West

ATTACHMENT III

EC REPORTS

Implementation Plans for the Transmission of CIC in SS7 Call Setup Messages

Attachment 11

EC REPORTS ON THEIR IMPLEMENTATION PLANS FOR THE TRANSMISSION OF CIC IN SS7 CALL SETUP MESSAGES

COMPANY	RESPONSE
ALLTEL	ALLTEL has no plans at this time for the implementation of CIC in the SS7 Call Setup message, but when this capability is available from our vendors and as we develop our SS7 network we will reconsider this position.
Ameritech	The optional Carrier Identification Code parameter is contained in DRAFT Issue 2 of the ANSI specification for ISUP protocol and is currently undergoing the industry approval process. Ameritech will need to prioritize this feature along with other capabilities for reissues of the technical requirements documents. We will then assess the funding, switch development and vendor availability before answering any questions pertaining to our implementation plans.
Bell Atlantic	Bell Atlantic is not opposed to passing this parameter to the IC. However, we need to know the demand for such a capability before we request it to be incorporated into the technical requirements and have our vendors develop it.
BellSouth	This parameter is not yet a standard. It is contained in Draft Issue 2 of ANSI Specification T1.113.2 now undergoing industry approval. Implementation will be based upon industry demand and vendor pricing and availability.
Cincinnati Bell	Under investigation. No specific plans to implement at this time.
Contel Service Corporation	Contel does not have any SS7 interconnection arrangements at this time. When we establish SS7 connections we will conform to industry agreements.
GTE	Working with our switch vendors regarding CIC transmission. There are no immediate plans for the implementation at this time.
Pacific Bell	Pacific Bell has no current implementation plans for this new optional parameter. Since, technical requirements and development schedules are not currently available, actual implementation plans will depend on the level of industry demand, vendor feature development and network installation schedules. Pacific Bell is supportive of the need the industry may have for this parameter.
Pacific Telecom	No Plans
SNET	SNET has not made any decisions on implementing this option in SS7 Call Setup messages.

EC REPORTS ON THEIR IMPLEMENTATION PLANS FOR THE TRANSMISSION OF CIC IN SS7 CALL SETUP MESSAGES - (CONT'D)

COMPANY	RESPONSE
SWBT	Assuming the standard to include the CIC parameter in the SS7 call setup message is approved, and assuming that a sufficient number of interexchange carriers express a desire for this type of additional information, SWBT would initiate an effort with its switch vendors to consider deployment of the feature.
Telesector Resources Group	We do not have any implementation plans at this time. A new SS7 optional CIC parameter is currently being worked in T1S1.3 standards. This capability is contained in the DRAFT Issue 2 ANSI specification for the ISUP protocol which is undergoing the industry approval process. When the definition of this parameter becomes "firm" as a result of the standards approval process we will be in a position to issue requirements to our vendors. However, in the interest of time, as this moves through the standards process we are prioritizing capabilities which will be included in our reissue of the technical requirements documents. When the technical requirements are issued and vendor availability determined its implementation will be considered in light of the funding available and our modernization plans.
United Telecommunications, Inc.	United has no plans to provide CIC in call setup messages to ICs at this time since it has not established any interconnection agreements with ICs. United will request its switch vendors to develop and implement this capability subject to provisioning of an industry standard and upon reaching agreement to interconnect with an IC.
U S WEST	Currently U S WEST has no information regarding vendor availability or cost, therefore we have no specific deployment plans for transmitting the SS7 optional CIC parameter.

ATTACHMENT IV

IC REPORTS

Need for Information on the Transmission of CIC in SS7 Call Setup Messages

IC REPORTS ON THE NEED FOR INFORMATION ON THE TRANSMISSION OF CIC IN SS7 CALL SETUP MESSAGES

COMPANY	RESPONSE
Alascom	No comment
AT&T	Presently, different types of interLATA traffic and/or services distinguished by unique CICs require the use of separate access trunk groups - - one for each CIC - - when that traffic is transmitted to the IC. The transmission of the CIC to the IC as part of the SS7 Call Setup signaling messages on domestic calls will allow such traffic to be forwarded to the IC on a single trunk group, thereby making better, more efficient use of the access network.
MCI	Yes, permits combination of multiple CICs on single efficient trunk group.
Metromedia-ITT	Metromedia-ITT has the need for the CIC to continue and to expand the practice of directing multiple CICs to a single access group rather than maintaining a separate group for each CIC.
US Sprint	US Sprint plans to utilize CIC information provided in the SS7 call setup message and is prepared to accept this information. The transmission of CIC information allows consolidation of multiple trunk groups, each carrying a single CIC code's traffic, into one trunk group.
Vyvx Telecom, Inc.	Vyvx Telecom needs the CIC in the ISUP message to allow network efficiencies gained by multiple CICs on a single trunk group, and other applications.

ATTACHMENT V

ICIC

INTEREXCHANGE CARRIERS
INDUSTRY COMMITTEE

Access Requirement
AR-ICIC-101
Issue 1, January
1991

SIGNALING SYSTEM NO. 7 (SS7) ACCESS INTERFACE REQUIREMENTS

ACCESS REQUIREMENTS ICIC

ICIC

INTEREXCHANGE CARRIERS
INDUSTRY COMMITTEE

Access Requirement
AR-ICIC-101
Issue 1, January
1991

SIGNALING SYSTEM NO. 7 (SS7)
ACCESS INTERFACE REQUIREMENTS

AR-ICIC-101
Issue 1, January 1991

For information write:

CHAIRMAN
Interexchange Carrier Industry Committee
2400 Glenville Road
Richardson, TX 75082

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This access requirements document is published by the Interexchange Carrier Industry Committee (ICIC) to inform the telecommunications industry of the ICIC's view of the means of interconnection between interexchange carriers and exchange carriers for Common Channel Signalling (CCS). Through publication of this access requirement and others to follow, the ICIC seeks to describe those generic capabilities required to enable equal access service to interexchange carriers.

The ICIC is a trade association comprised of interLATA voice and data messaging carriers.

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