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Data Format Standardization

Within the Defense Commercial Communications Office

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Executive Summary

DATA FORMAT STANDARDIZATION WITHIN THE DEFENSE COMMERCIAL COMMUNICATIONS OFFICE

The Defense Commercial Communications Office (DECCO) acquires long-haul telecommunications services and equipment for the Department of Defense and other Federal agencies such as the Federal Aviation Administration. DECCO also bills these organizations on behalf of telecommunications providers. The billing and accounting functions were at one time manual processes limited to a few telecommunications providers; however, due to deregulation in the telecommunications industry, the number of service providers has increased and the need to provide service charge detail and voucher information electronically is now critical to the billing and accounting functions. To facilitate the electronic submission of billing and accounting data, new service providers must be provided standard data definitions, data content, and format for their submissions.

Our recommendations for standard data definitions are contained in the data dictionary. The data dictionary provides an identifier, description, data type, record type, length, format, and values for each required data element.

Given that the telecommunications industry and DoD are moving toward the use of American National Standards Institute (ANSI), Accredited Standards Committee (ASC) X12 electronic data interchange standards for business transactions, we recommend establishing a DoD standard compliant with ANSI ASC X12. Using an industry standard will help ensure that DoD does not pay additional fees to telecommunications providers for "DoD unique" data formats.

The Telecommunications Industry Forum (TCIF) has published a convention for using the ANSI ASC X12 transaction set for a "Consolidated Service Invoice/Statement" as a standard way of transmitting service invoices and required data for auditing prior to payment. The draft implementation convention described in this report shows how DECCO's system data requirements can be met by this ANSI ASC X12-compliant transaction set. We recommend DECCO work with TCIF to finalize

the convention and adopt it as the DoD standard. To do so will align DECCO with the telecommunications industry, support DoD's policy of making maximum use of electronic data interchange for paperless processing of all business-related transactions, and preclude excess contractual costs for DoD-unique formats.

CONTENTS

	<u>Page</u>
Executive Summary	iii
Chapter 1. Billing and Accounting Functions of DECCO	1
Chapter 2. Data Requirements	3
Communications Service Authorization Number	3
Billing Records	3
Service Charge Detail Reports	3
Information Security Considerations	6
Chapter 3. Recommended Data Structure	9
Telecommunications Industry Trends	9
EDI Data Structure Recommendations	9
Glossary	13
Appendix A. Data Dictionary	
Appendix B. Data Dictionary Sorted First by Identifier and then by Record Type	
Appendix C. Data Dictionary Sorted First by Record Type and then by Identifier	
Appendix D. Draft DECCO Convention for Transaction Set 811, <i>Consolidated Service Invoice/Statement</i>	

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CHAPTER 1

BILLING AND ACCOUNTING FUNCTIONS OF DECCO

The Defense Commercial Communications Office (DECCO) acquires long-haul telecommunications services and equipment for the Department of Defense and other Federal agencies such as the Federal Aviation Administration. It also provides billing capabilities between those organizations and telecommunications providers. At one time, the billing and accounting functions were manual processes; in recent years, however, carriers have increasingly provided service charge detail and voucher data electronically. DECCO needs to use standard formats and structures for those carrier-submitted data in order to process the received information efficiently. Thus, it is important that DECCO first define its data requirements and then map those requirements into a data structure that is being adopted by all telephone companies. Failure to do so will lead to increased costs when companies bid on contracts with DoD-unique formats and structures.

Billing is performed by DECCO by following these steps:

- A service request is sent from a customer (customers are military or Government organizations) to DECCO.
- DECCO sends an inquiry for service to a vendor (vendors are telephone companies).
- The vendor responds to DECCO with a service quote.
- DECCO sends back to the vendor a service order.
- The vendor initiates service with the customer.
- The vendor sends a bill for the customer's service to DECCO.
- DECCO sends payment for the customer's service to the vendor.
- DECCO then bills the customer for services.
- The customer sends payment to DECCO.

A service charge detail (SCD) report is generated by each telephone company for each billing cycle to document activity during the cycle, including any changes in

service that occurred and the impact of those changes on billing rates. For each billing cycle, DECCO generates what it calls a "Bump List" that enumerates the charges for each Communications Service Authorization (CSA) number that dose not match what DECCO thinks it should be on the basis of previous contractual agreements. DECCO uses the SCD as a reference tool to generate the Bump List and to help resolve the billing discrepancies that appear on that list.

CHAPTER 2

DATA REQUIREMENTS

COMMUNICATIONS SERVICE AUTHORIZATION NUMBER

The CSA number is the one field that serves as the primary means for identifying different customers for DECCO. DECCO-assigned CSA numbers are derived from the Commercial Circuit Number (CCN) that authorizes a commercial company to provide a service and bill for it. The CSA number is composed of five fields: telephone company code, prefix, type, circuit number, and suffix. Definitions of all five fields are found in the Data Dictionary in Appendix A.

BILLING RECORDS

Billing records currently follow a 145-character format as shown in Table 1. Definitions of the fields shown in Table 1 are found in the data dictionary in Appendix A. The data dictionary fields are sorted first by identifier and then by record type in Appendix B. In Appendix C, the fields are sorted first by record type and then by identifier.

SERVICE CHARGE DETAIL REPORTS

For illustrative purposes, we used the SCD reports from American Telephone and Telegraph (AT&T). This information is representative of what DECCO needs. All fields listed in the report format below are defined in the data dictionary in Appendix A. A sample outline of an SCD report is as follows:

- Header Information (used for contract identification)
- Customer Identification Information
 - Activity Records Detail Information
 - Inventory Records Detail Information
- Detail of New Charges Information

TABLE 1
CURRENT BILLING RECORDS FORMAT

Columns	Field name
001-006	Telephone Company Use
007-010	Telephone Company Code
011-013	Prefix
014-017	Type
018-023	Circuit Number
024-026	Suffix
027-028	To-Year
029-030	To-Month
031-032	To-Day
033	Blank Field
034-035	Adjustment Year
036-037	Adjustment Month
038-039	Adjustment Day
040-041	Individual Responsibility Code
042	Blank Field
043-045	Transaction Code
046-145	Money Fields/TELCO Use

Header Information

Service charge detail reports begin with header information that documents the contract which authorizes a commercial company to provide and bill for telephone service. Those data allow DECCO to determine the person responsible for reconciling particular accounts, whether the accounts have activity records or inventory records. The following required fields are printed in the header area in this order:

- Commercial Circuit Number (CCN)
- Communications Service Authorization (CSA) Number
- Account Manager Code (AMC)
- Invoice Date
- Interstate/Intrastate Identifier
- Start Date
- Service Description

Customer Identification Information

For each customer whose service is provided by a particular contract, the following required identification fields are printed in the SCD report in this order:

Circuit Location (CKL) Number
Name of Customer
Address of Customer – First Line
Address of Customer – Second Line
Address of Customer – Third Line
Address of Customer – Fourth Line
Numbering Plan Area (NPA)
Exchange (NNX)
Serving Wire Center (SWC)
Central Office (CO)
Vertical Coordinate of the SWC
Horizontal Coordinate of the SWC
Local Access Transport Area (LATA)

These identification fields are then followed by documentation of all of the activity records detail information and/or all of the inventory records detail information for that customer for the designated billing period.

Activity Records Detail Information

Activity records are known as Type 4 records. They provide information on additions, changes, and deletions to accounts. If the record on a report is an activity record, each individual customer's identification fields for a specified contract are then followed by a complete list of the additions, changes, or deletions in service which were made to that customer's account during the billing period as documented by information in fields in the following order:

Item Number
Type of Action
Quantity
Uniform Service Ordering Code (USOC)
Service Charge
Monthly Charge
One-Time/Partial Charges/Credits
Uniform Service Ordering Code (USOC) Nomenclature
Common Language Location Indicator (CLLI) Code
Mileage

Adjustment Factor
Total Net Change

The Bell/Independent Company Indicator field, if filled, follows the Service Charge, Monthly Charge, and One-Time/Partial Charges/Credits fields.

Inventory Records Detail Information

Inventory records are known as Type 5 records. They provide a summary of monthly charges. The following required fields are printed in the inventory records area in this order:

Item Number
Quantity
USOC Nomenclature
Effective Date
Monthly Charge

Detail of New Charges Information

The detail of new charges lists the contract's value after changes have taken place. The detail fields appear at the end of an SCD report. They follow the activity and/or inventory records detail information for all customers for a given contract. Detail fields appear in the following order:

Communications Service Authorization (CSA) Number
Invoice Date
Interstate/Intrastate Identifier
Commercial Circuit Number
Period From
Period To
Totals: Monthly Charge
Service Order (SO) Number
Totals: One-Time/Partial Charges/Credits
Totals: Taxes and Fees
Total New Charges, Taxes and Fees

INFORMATION SECURITY CONSIDERATIONS

For billing records, DECCO's philosophy is to share with its customers and vendor as much information about its billing process as possible with the hope that having a better understanding of the process will decrease the number of errors that occur. However, the "money fields" area, which shows the actual cost of service, may contain proprietary rate information that vendors may not want their competitors to

see. Thus, that field should be protected from unauthorized users. On the SCD reports, several types of information should be considered sensitive from a security standpoint; examples are location data, command communications service designator (CCSD) data, and associated charges. Those three types of information are especially sensitive when examined in the aggregate.

CHAPTER 3

RECOMMENDED DATA STRUCTURE

TELECOMMUNICATIONS INDUSTRY TRENDS

The telecommunications industry has been involved in developing some data structure standards in the area of electronic data interchange (EDI). In particular, the EDI committee within the Telecommunications Industry Forum (TCIF), which is composed of representatives from exchange carriers, interexchange carriers, customers, manufacturers, and suppliers of the telecommunications industry, has been working on the interpretation of established and future X12 standards for application within its industry.¹ TCIF has released a draft version of its interpretation of Transaction Set 811, *Consolidated Service Invoice/Statement*, X12 Version 003, Release 020. The set was first approved in June 1991 as part of the ANSI ASC X12 *Draft Standards for Trial Use*, Version 003, Release 012. Transaction Set 811 can be used for billing complex and structured service invoice detail. It can be used by organizations who are interested in sending or receiving either consolidated or stand-alone invoices for service arrangements that require processing other than that of the typical product invoice. We recommend DECCO work with TCIF to finalize the convention and adopt it as the DoD standard. By doing so, DECCO will be aligning itself with the telecommunications industry and supporting DoD's policy established by Deputy Secretary of Defense memorandum of May 24, 1988, Subject: *Electronic Data Interchange of Business-Related Transactions*, to make maximum use of EDI for paperless processing of all business-related transactions. In addition, DECCO will preclude additional contract costs for industry to conform to DoD-unique formats.

EDI DATA STRUCTURE RECOMMENDATIONS

All DECCO's requirements for information — as described in Chapter 2, can be easily accumulated in the Transaction Set 811. Recommendations as to exactly how

¹X12 standards are those approved by the Accredited Standards Committee (ASC) X12 of the American National Standards Institute (ANSI).

the existing DECCO system data structure can feed/interface with ANSI ASC X12-compliant EDI are found in Appendix D.

The draft convention defines DECCO's data requirements within the context of the ASC X12 standard and the TCIF guidelines. That is, the convention tells which segments and elements are to be used to carry the required DECCO data. The convention is used to define the input and output files of the EDI translation software. This process – called mapping – relates ASC X12 data to a user-defined file and enables the user to write just one interface program to integrate the data into his or her application systems.

A logical design of an EDI system is shown in Figure 1 to illustrate the general data flows. The EDI system is considered system software (managed like an operating system or communication software) and not part of one application, but available to many applications. Inbound EDI transmissions are received from senders directly or through a combination of services provided by the DoD network or a commercial contract (value-added) network or both. Each transmission is validated, translated from an ASC X12 format, placed in a file format acceptable to the application systems, and uploaded on demand. Acceptance and rejection data are created for outbound translation. Before and during the translation process, critical files are backed up for recovery and audit trails are created. Outbound EDI data are downloaded from the application systems, in a file format acceptable to the translator. Outbound data are translated into ASC X12 format, prepared for transmission, and transmitted to recipients directly or through a combination of services provided by the DoD network and/or a commercial contract network.

An EDI system is composed of both software and hardware and provides the ability to exchange data electronically between computer applications using ASC X12 standard transactions. The data are exchanged by interfacing the EDI translation software with existing application systems. Classified data are not normally processed on the system; however, sufficient controls are installed to ensure confidentiality, integrity, and availability of data. The system usually consists of four modules: the system control module, the communications module, the translation module, and the security module.

The *system control module* provides the EDI system administrator with an interface to the system. It enables the administrator to enter, review, and modify

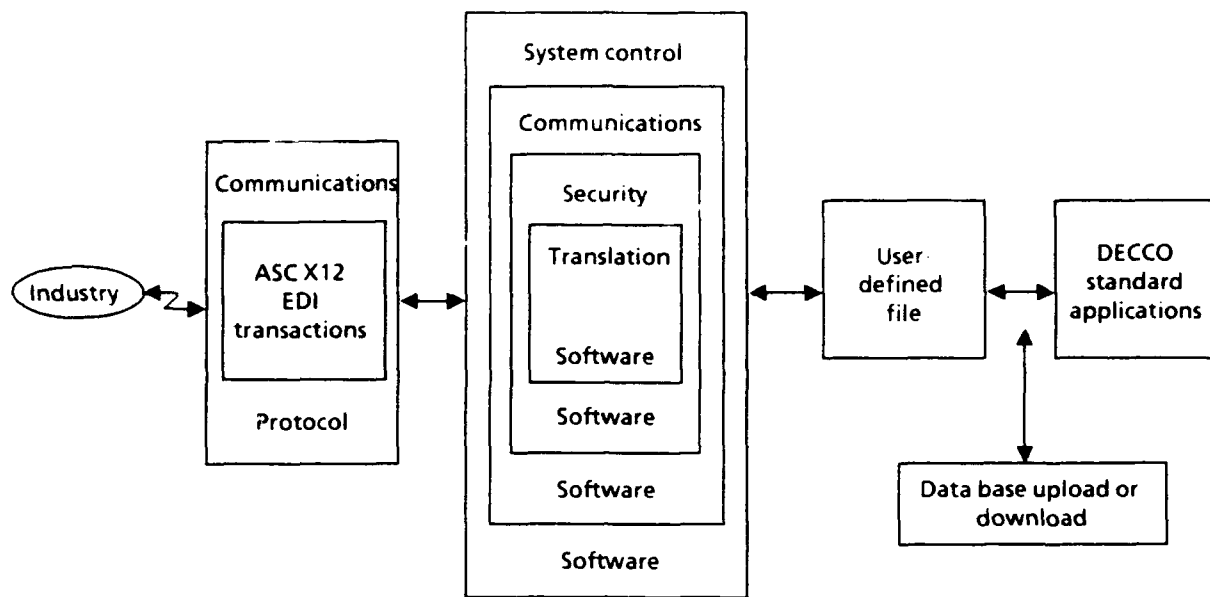


FIG. 1. EDI SYSTEM

data control files maintained by the EDI system. It routes data to the application programs, translator, security module, and communications module, and it logs audit information on all inbound and outbound EDI data.

The *communications module* provides connectivity directly with data recipients through commercial and DoD networks. Scripts are provided to enable the system administrator to comply with each network's unique sign-on and dialog requirements. The communications module supports unattended operation and error recovery. It provides communication management reports such as the number of records transmitted and received from each destination and the number of transmission errors.

The *translation module* provides the ability to examine, copy, update, and apply standards without programming. Multiple versions and releases of ASC X12 standards are supported simultaneously. For outbound data, the module translates application data to the desired EDI format, validates all data to ensure compliance with ASC X12 standards, provides the system control module with audit information, and may compress the data for efficient EDI transmission. For inbound data, the module validates interchanges against ASC X12 standards and translates the data to

a neutral (user-defined) format for routing to the application programs. It also provides the system control module with audit information.

The *security module* provides encryption, key management, and authentication. Under the control of the system control module, it will encrypt/decrypt files or records and generate digital signatures. During decryption it automatically detects message authentication codes and digital signatures and reports on their validity to the system control module.

GLOSSARY

AMC	=	Account Manager Code
ANSI	=	American National Standards Institute
ASC X12	=	Accredited Standards Committee
AT&T	=	American Telephone and Telegraph
CCN	=	Commercial Circuit Number
CCSD	=	command communications service designator
CKL	=	Circuit Location
CLLI	=	Common Language Location Indicator
CO	=	Central Office
CSA	=	Communications Service Authorization
DECCO	=	Defense Commercial Communications Office
EDI	=	electronic data interchange
LATA	=	Local Access Transport Area
NNX	=	Exchange
NPA	=	Numbering Plan Area
SCD	=	service charge detail
SO	=	Service Order
SWC	=	Serving Wire Center
TCIF	=	Telecommunications Industry Forum
TELCO	=	Telephone Company
USOC	=	Uniform Service Ordering Code

APPENDIX A

DATA DICTIONARY

DATA DICTIONARY

IDENTIFIER: Account Manager Code (AMC)

DESCRIPTION: This field is generated by the Defense Commercial Communications Office (DECCO) to identify who is responsible for different accounts.

DATA TYPE: Alpha/numeric

RECORD TYPE: Header information for activity or inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 2

FORMAT: No special format is required.

VALUES: Values are the assigned codes of account managers.

IDENTIFIER: Address of Customer – First Line

DESCRIPTION: This field identifies the first line in the address of a customer.

DATA TYPE: Alpha/numeric

RECORD TYPE: Header information for activity or inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 50

FORMAT: No special format is required.

VALUES: No validity checks are made.

COMMENTS: Data in this field are generated by the original order for service.

IDENTIFIER: Address of Customer – Second Line

DESCRIPTION: This field identifies the second line in the address of a customer.

DATA TYPE: Alpha/numeric

RECORD TYPE: Header information for activity or inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 50

FORMAT: No special format is required.

VALUES: No validity checks are made.

COMMENTS: Data in this field are generated by the original order for service.

IDENTIFIER: Address of Customer – Third Line

DESCRIPTION: This field identifies the third line in the address of a customer.

DATA TYPE: Alpha/numeric

RECORD TYPE: Header information for activity or inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 50

FORMAT: No special format is required.

VALUES: No validity checks are made.

COMMENTS: Data in this field are generated by the original order for service.

IDENTIFIER: Address of Customer – Fourth Line
DESCRIPTION: This field identifies the fourth line in the address of a customer.
DATA TYPE: Alpha/numeric
RECORD TYPE: Header information for activity or inventory records
REQUIREMENT: Mandatory
FIELD LENGTH: 50
FORMAT: No special format is required.
VALUES: No validity checks are made.
COMMENTS: Data in this field are generated by the original order for service.

IDENTIFIER: Adjustment Day
DESCRIPTION: This field identifies the day of the month on which an adjustment to a bill is being made.
DATA TYPE: Numeric
RECORD TYPE: Billing records
REQUIREMENT: Optional
FIELD LENGTH: 2
FORMAT: Values less than 10 must begin with 0.
VALUES: 01 through 31. Checks are made for valid last days of the month (e.g., 30 for June, 31 for July, 28 or 29 for February, etc.).
COMMENTS: This field is found in columns 038-039 in the current DECCO automated billing format.

IDENTIFIER: Adjustment Factor
DESCRIPTION: This field indicates the adjustment factor for a change in service.
DATA TYPE: Numeric
RECORD TYPE: Activity records
REQUIREMENT: Mandatory
FIELD LENGTH: 8
FORMAT: S99V9(06)
VALUES: No validity checks are made. This field is filled with leading zeros.
COMMENTS: The adjustment factor is calculated by multiplying the adjustment factor by the total net change in charges.

IDENTIFIER: Adjustment Month
DESCRIPTION: This field identifies the month of the date that an adjustment to a bill is being made.
DATA TYPE: Numeric
RECORD TYPE: Billing records
REQUIREMENT: Optional
FIELD LENGTH: 2
FORMAT: Values less than 10 must begin with 0.
VALUES: 01 through 12. Value cannot be greater than the current month.
COMMENTS: This field is found in columns 036-037 in the current DECCO automated billing format.

IDENTIFIER: Adjustment Year

DESCRIPTION: This field identifies the year of the date that an adjustment to a bill is being made.

DATA TYPE: Numeric

RECORD TYPE: Billing records

REQUIREMENT: Optional

FIELD LENGTH: 2

FORMAT: Values less than 10 must begin with 0.

VALUES: 00 through 99. Value cannot be greater than the current year.

COMMENT: DECCO's contractual system has been updated to handle a conversion from year 99 to 00 when the rollover to the year 2000 occurs. The billing system is also in the process of developing such a conversion. This field is found in columns 034-035 in the current DECCO automated billing format.

IDENTIFIER: Bell/Independent Company Indicator

DESCRIPTION: This field identifies whether a telephone company is Bell-associated or an independent carrier.

DATA TYPE: Alpha

RECORD TYPE: Activity or inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 1

FORMAT: Format is one character from the list of values below.

VALUES: Acceptable values are:

B – Bell-associated company

I – Independent carrier

IDENTIFIER: Central Office (CO)

DESCRIPTION: This field identifies the Central Office for a telephone company.

DATA TYPE: Alpha/numeric

RECORD TYPE: Customer identification information for activity or inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 11

FORMAT: No special format is required.

VALUES: No validity checks are made.

IDENTIFIER: Circuit Location (CKL) Number

DESCRIPTION: This field identifies the CKL number for an account.

DATA TYPE: Alpha/numeric

RECORD TYPE: Customer identification information for activity or inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 4

FORMAT: This field is filled with leading zeros.

VALUES: No validity checks are made.

COMMENTS: In DECCO's data base, this field does not always correspond to the telephone companies' CKLs, but that does not matter for point-to-point communications.

IDENTIFIER: Commercial Circuit Number

DESCRIPTION: This field identifies the circuit number assigned commercially to an account.

DATA TYPE: Alpha/numeric

RECORD TYPE: Header information and detail of new charges information for activity or inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 24

FORMAT: No special format is required.

VALUES: No validity checks are made. If field is empty, spaces are inserted.

IDENTIFIER: Common Language Location Indicator (CLLI) Code

DESCRIPTION: This field indicates the CLLI Code as established by the Federal Communications Commission (FCC). It is required by DECCO to determine circuit routing and helps to identify customer location.

DATA TYPE: Alpha/numeric

RECORD TYPE: Activity records

REQUIREMENT: Mandatory

FIELD LENGTH: 11

FORMAT: No special format is required.

VALUES: No validity checks are made.

IDENTIFIER: Communications Service Authorization (CSA) Number

DESCRIPTION: DECCO contracts in the form of CSA numbers. DECCO-assigned CSA numbers are derived from the commercial circuit number (CCN) that authorizes a commercial company to provide and bill for a service.

DATA TYPE: Alpha/numeric

RECORD TYPE: Header information and detail of new charges information for activity or inventory records and billing records

REQUIREMENT: Mandatory

FIELD LENGTH: 20

FORMAT: The CSA number is composed of five subfields: Telephone Company Code, Prefix, Type, Circuit Number, and Suffix. Not all five subfields are filled in every case. The fields filled depend upon the type of CSA involved. The five subfields are defined as follows:

IDENTIFIER: Telephone Company Code

DESCRIPTION: This field is used to identify a contract with a commercial company who is providing commercial service for a Government system.

DATA TYPE: Alpha

RECORD TYPE: Billing records

REQUIREMENT: Mandatory

FIELD LENGTH: 4

FORMAT: This field is left-justified. Unused positions are filled with spaces.

VALUES: Codes are validated against the standard elements table which contains all valid telephone company codes.

COMMENTS: This field is found in Columns 007-010 in the current DECCO automated billing format.

IDENTIFIER: Prefix

DESCRIPTION: This field identifies the prefix portion of the Communications Service Authorization (CSA) Number. The CSA number prefix is derived from the prefix portions of a commercial circuit number (CCN). It is used by commercial companies for various purposes such as to identify a state or telephone company exchange in some cases.

DATA TYPE: Alpha/numeric

RECORD TYPE: Billing records

REQUIREMENT: Mandatory

FIELD LENGTH: 3

FORMAT: This field is left-justified. Unused positions are filled with spaces.

VALUES: No validity checks are made.

COMMENTS: This field is found in columns 011-013 in the current DECCO automated billing format.

IDENTIFIER: Type

DESCRIPTION: This field identifies the Communications Service Authorization (CSA) Number Type. Type refers to the type of service being provided (i.e., phone, radio, data, etc.)

DATA TYPE: Alpha

RECORD TYPE: Billing records

REQUIREMENT: Mandatory

FIELD LENGTH: 4

FORMAT: This field is left-justified. Unused positions are filled with spaces. The second position in the field is used only when the service being provided has an alternate use. For example, a data service (D) whose alternative use is phone service (P) is assigned a type of (DP). In some cases, the Type code is assigned in conjunction with the Grade field to indicate the grade/speed of the service being provided. For construction CSA numbers, the Type field will be blank and the first position of the Circuit Number will be 6 or 8.

VALUES: Values are listed in a code table.

COMMENTS: This field is found in columns 014-017 in the current DECCO automated billing format.

IDENTIFIER: Circuit Number

DESCRIPTION: Communications Service Authorization (CSA) Number Circuit Number. This field is used in some cases to identify the base number of a commercial circuit number (CCN).

DATA TYPE: Alpha/numeric

RECORD TYPE: Billing records and header information and detail of new

charges information for activity and inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 6

FORMAT: This field is left-justified. Unused positions are filled with spaces. For Construction CSA Numbers, the Type field will be blank and the first position of the Circuit Number field will be 4, 6, or 8.

VALUES: This field is edited in the following cases:

If Prefix equals OC and Type equals IT, then the first position must equal 0.

If Type equals TK, then the first position must equal 9.

COMMENTS: This field is found in columns 018-023 in the current DECCO automated billing format.

IDENTIFIER: Suffix

DESCRIPTION: This field is used to expand the circuit base number. It may contain information that makes the Communications Service Authorization (CSA) number unique in order to distinguish it from other CSA numbers or for leftover digits from a telephone number.

DATA TYPE: Alpha/numeric

RECORD TYPE: Billing records

REQUIREMENT: Mandatory

FIELD LENGTH: 3

FORMAT: This field is left-justified. Unused positions are filled with spaces.

VALUES: No validity checks are made.

COMMENTS: This field is found in columns 024-026 in the current DECCO automated billing format.

VALUES: The entire CSA number is validated against the circuit history file. If a CSA number exists on the history file, then it is valid.

IDENTIFIER: Effective Date

DESCRIPTION: This field identifies the date that a charge is effective.

DATA TYPE: Numeric

RECORD TYPE: Inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 6

FORMAT: Format is year followed by month followed by day (YYMMDD).

VALUES: No validity checks are made.

IDENTIFIER: Exchange (NNX)

DESCRIPTION: This field identifies the local exchange for an account and is used jointly with the Numbering Plan Area (NPA) field.

DATA TYPE: Numeric

RECORD TYPE: Customer identification information for activity or inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 3

FORMAT: No special format is required.

VALUES: No validity checks are made.

IDENTIFIER: Horizontal Coordinate of the Serving Wire Center

DESCRIPTION: This field is used with the vertical coordinate of the Serving Wire Center to calculate mileage/distance between centers in order to determine cost.

DATA TYPE: Numeric

RECORD TYPE: Customer identification information for activity or inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 7

FORMAT: 9(5)V99

VALUES: No validity checks are made. This field is filled with leading zeros.

IDENTIFIER: Individual Responsibility Code (IRC)

DESCRIPTION: This field will be used by DECCO to identify who entered the bill into the system. In an automated bill, this field will be used by DECCO to identify the type of system used to enter the bill, e.g., the "fast-pay" system.

DATA TYPE: Alpha/numeric

RECORD TYPE: Billing records

REQUIREMENT: Optional

FIELD LENGTH: 2

FORMAT: No special format is required.

VALUES: No validity checks are made.

COMMENTS: This field is found in columns 040-041 in the current DECCO automated billing format.

IDENTIFIER: Interstate/Intrastate Identifier

DESCRIPTION: This field identifies whether service is interstate or intrastate.

DATA TYPE: Alpha/numeric

RECORD TYPE: Header information and detail of charges information for activity or inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 1

FORMAT: No special format is required.

VALUES: If this field is populated, it indicates that service is interstate. If the field is empty, then the service is intrastate.

IDENTIFIER: Invoice Date

DESCRIPTION: This field identifies the last day in the billing period.

DATA TYPE: Numeric

RECORD TYPE: Header information and detail of new charges information for activity or inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 6

FORMAT: Format is year followed by month followed by day (YYMMDD).

VALUES: No validity checks are made.

IDENTIFIER: Item Number

DESCRIPTION: This field indicates an item number used within a record to facilitate identification of numerous items relating to the same account. For example, if five changes in service were made for one customer, they are given Item Numbers of 1 through 5.

DATA TYPE: Alpha/numeric

RECORD TYPE: Activity and inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 6

FORMAT: No special format is required.

VALUES: Values are whole numbers beginning with 1. This field is filled with leading zeros.

IDENTIFIER: Local Access Transport Area (LATA)

DESCRIPTION: This field identifies a jurisdictional boundary for a telephone company. A LATA is assigned by the Federal Communications Commission (FCC). The boundary assigned depends on the amount of usage and/or population in that specific geographic area.

DATA TYPE: Alpha/numeric

RECORD TYPE: Customer identification information for activity or inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 4

FORMAT: No special format is required.

VALUES: No validity checks are made. This field is filled with spaces.

IDENTIFIER: Mileage

DESCRIPTION: This field indicates the number of miles affected by a particular type of change in service.

DATA TYPE: Numeric

RECORD TYPE: Activity records

REQUIREMENT: Mandatory

FIELD LENGTH: 5

FORMAT: 9(5)

VALUES: No validity checks are made. This field is filled with leading zeros.

IDENTIFIER: Money Fields

DESCRIPTION: This field is an area composed of "money fields" that identify what the charges are that are being billed. Part of this area is also designated for telephone company use only.

DATA TYPE: Alpha/numeric

RECORD TYPE: Billing records

REQUIREMENT: Mandatory

FIELD LENGTH: 100

FORMAT: Each money field may have a maximum of 11 positions within it. The format used for a money field is as follows: a one-letter code that indicates the type of charge, followed by up to 9 digits that indicate the amount of the charge, followed by

a plus (+) or minus (-) sign that delimits each money field from the next one. Money fields do not have to be zero-filled. Money fields may fill as many as 70 positions of this 100-position free-text area. The last 30 positions are for use by the telephone company only. If less than the maximum amount of space allowed for money fields is used, the last money field may be ended with an asterisk (*), which indicates that the remainder of the area is reserved by the telephone company for its own use. This is done if the telephone company needs more than 30 positions to enter its information.

VALUES: This area must have at least one money field entered within it that is a total (code "T") charge. A recurring charge will be generated if only one money field is entered and it begins with a T. If only one money field exists and it is not a total, then the record is in error. Validation checks are made to ensure that only numbers are entered between the money field delimiters. An error is generated if the sum of the individual money fields does not match the money field labeled as the "total." Acceptable charge codes are stored in a code table. They are as follows:

<u>Type</u>	<u>Meaning</u>
A	Outage: Credit for an outage that occurred not due to the customer's fault
B	Message Units: Total charge for multiple calls made to the same area
I	Interest: A percentage charged for payment received after a payment is due
J	Surcharges
L	Tolls: Charges for individual toll calls
M	Termination: A charge incurred when a customer terminates service before a contract expires
N	Nonrecurring: One-time-only charge (e.g., start-up charge)
R	Recurring: Fixed monthly recurring charge (e.g., regular monthly service)
T	Total: Total of all charges

<u>Type</u>	<u>Meaning</u>
U	Construction: Line installation
W	Maintenance of Service: Repair work that is requested by the customer
X	Taxes: 911, state, local, city, and other taxes

COMMENTS: Toll calls and maintenance charges must be isolated and certified by verifying with each customer that they were made. Such certification is required for toll calls over \$200. Another 15 percent to 20 percent of toll calls under \$200 are also certified. All maintenance charges regardless of cost must be certified. This field is found in columns 046-145 in the current DECCO automated billing format.

IDENTIFIER: Monthly Charge

DESCRIPTION: This field identifies a recurring monthly charge for an account.

DATA TYPE: Numeric

RECORD TYPE: Activity and inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 11

FORMAT: S9(09)V99

VALUES: Acceptable values are 0 to 999999999.99. No validity checks are made. This field is filled with leading zeros.

IDENTIFIER: Name of Customer

DESCRIPTION: This field identifies a customer.

DATA TYPE: Alpha/numeric

RECORD TYPE: Customer identification information for activity or inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 50

FORMAT: No special format is required.

VALUES: No validity checks are made.

COMMENTS: Data in this field are generated by the original order for service.

IDENTIFIER: Numbering Plan Area (NPA)

DESCRIPTION: This field identifies the area code for an account at a service location and is used jointly with the Exchange field.

DATA TYPE: Alpha/Numeric

RECORD TYPE: Customer identification information for activity or inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 3

FORMAT: No special format is required.

VALUES: No validity checks are made.

IDENTIFIER: One-Time/Partial Charges/Credits

DESCRIPTION: This field identifies one-time charges, partial charges, and credits for an account.

DATA TYPE: Numeric

RECORD TYPE: Activity records

REQUIREMENT: Mandatory

FIELD LENGTH: 14

FORMAT: S9(12)V99

VALUES: Acceptable values are 0 to 999999999999.99. No validity checks are made. This field is filled with leading zeros.

IDENTIFIER: Period From

DESCRIPTION: This field identifies the service beginning date for monthly charges.

DATA TYPE: Numeric

RECORD TYPE: Detail of new charges information for activity and inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 6

FORMAT: Format is year followed by month followed by day (YYMMDD).

VALUES: No validity checks are made.

IDENTIFIER: Period To

DESCRIPTION: This field identifies the service ending date for monthly charges.

DATA TYPE: Numeric

RECORD TYPE: Detail of new charges information for activity and inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 6

FORMAT: Format is year followed by month followed by day (YYMMDD).

VALUES: No validity checks are made.

IDENTIFIER: Quantity

DESCRIPTION: The number of items represented by a Uniform Service Ordering Code (USOC).

DATA TYPE: Numeric

RECORD TYPE: Activity and inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 5

FORMAT: No special format is required.

VALUES: No validity checks are made. This field is filled with leading zeros.

IDENTIFIER: Service Charge

DESCRIPTION: This field identifies a recurring service charge for an account.

DATA TYPE: Numeric

RECORD TYPE: Activity records

REQUIREMENT: Mandatory

FIELD LENGTH: 14

FORMAT: S9(12)V99

VALUES: Acceptable values are 0 to 999999999999.99. No validity checks are made. This field is filled with leading zeros.

IDENTIFIER: Service Description

DESCRIPTION: The data in this field describe further the type and grade of service. It is tied to the type description in the Communications Service Authorization (CSA) number.

DATA TYPE: Alpha

RECORD TYPE: Header information for activity or inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 30

FORMAT: No special format is required.

VALUES: No validity checks are made.

IDENTIFIER: Service Order (SO) Number

DESCRIPTION: This field indicates the vendor's Service Order Number.

DATA TYPE: Alpha/numeric

RECORD TYPE: Detail of new charges information for activity and inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 11

FORMAT: No special format is required.

VALUES: No validity checks are made.

IDENTIFIER: Serving Wire Center (SWC)

DESCRIPTION: This field identifies the location of the local carrier's wire center.

DATA TYPE: Alpha/numeric

RECORD TYPE: Customer identification information for activity or inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 11

FORMAT: No special format is required.

VALUES: No validity checks are made.

IDENTIFIER: Start Date

DESCRIPTION: This field identifies the day that service is installed.

DATA TYPE: Numeric

RECORD TYPE: Header information for activity or inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 6

FORMAT: Format is year followed by month followed by day (YYMMDD).

VALUES: No validity checks are made.

IDENTIFIER: Telephone Company Use

DESCRIPTION: This field is used only by telephone companies for whatever purposes they wish.

DATA TYPE: Alpha/numeric

RECORD TYPE: Billing records

REQUIREMENT: Optional

FIELD LENGTH: 6

FORMAT: No special format.

VALUES: No special validation rules, acceptable ranges, or codes lists.

COMMENTS: If this field is used on an automated bill, DECCO automatically moves spaces into the field. This field is found in columns 001-006 in the current DECCO automated billing format.

IDENTIFIER: To-Day

DESCRIPTION: This field identifies the date of the last day of the billing period for any month.

DATA TYPE: Numeric

RECORD TYPE: Billing records

REQUIREMENT: Mandatory

FIELD LENGTH: 2

FORMAT: Values less than 10 must begin with 0.

VALUES: 01 through 31. Checks are made for valid last days of the month (e.g., 30 for June, 31 for July, etc.) To-Day is compared to start and end dates on file with a contract to see if it falls after the contract effective date and prior to the contract disconnect date. Value cannot be greater than the current date.

COMMENT: On adjustment bills, the To-Day refers to the To-Day on the original bill. This field is found in columns 031-032 in the current DECCO automated billing format.

IDENTIFIER: To-Month

DESCRIPTION: This field identifies the month of the last day of the billing period for any month.

DATA TYPE: Numeric

RECORD TYPE: Billing records

REQUIREMENT: Mandatory

FIELD LENGTH: 2

FORMAT: Values less than 10 must begin with 0.

VALUES: 01 through 12. To-Month is compared to start and end dates on file with a contract to see whether it falls after the contract effective date and prior to the contract disconnect date. Value cannot be greater than the current month.

COMMENT: On adjustment bills, the To-Month refers to the To-Month on the original bill. This field is found in columns 029-030 in the current DECCO automated billing format.

IDENTIFIER: To-Year

DESCRIPTION: This field identifies the year of the last day of the billing period for any month.

DATA TYPE: Numeric

RECORD TYPE: Billing records

REQUIREMENT: Mandatory

FIELD LENGTH: 2

FORMAT: Values less than 10 must begin with 0.

VALUES: 00 through 99. To-Year is compared to start and end dates on file with a contract to see if it falls after the contract effective date and prior to the contract disconnect date. Value cannot be greater than the current year.

COMMENTS: DECCO's contractual system has been updated to handle a conversion from year 99 to 00 when the rollover to the year 2000 occurs. The billing system is also in the process of developing such a conversion. On adjustment bills, the To-Year

refers to the To-Year on the original bill. This field is found in columns 027-028 in the current DECCO automated billing format.

IDENTIFIER: Total Net Change

DESCRIPTION: This field indicates the total net change to an account.

DATA TYPE: Numeric

RECORD TYPE: Activity records

REQUIREMENT: Mandatory

FIELD LENGTH: 14

FORMAT: S9(12)V99

VALUES: Acceptable values are 0 through 999999999999.99. No validity checks are made. This field is filled with leading zeros.

IDENTIFIER: Total New Charges, Taxes, and Fees

DESCRIPTION: This field indicates the final sum of all new charges, taxes, and fees.

DATA TYPE: Numeric

RECORD TYPE: Detail of new charges information for activity and inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 14

FORMAT: 9(12)V99

VALUES: Acceptable values are 0 through 999999999999.99. No validity checks are made. This field is filled with leading zeros.

IDENTIFIER: Totals: Monthly Charge

DESCRIPTION: This field indicates the total monthly charge's value is after all changes have taken place.

DATA TYPE: Numeric

RECORD TYPE: Detail of new charges information for activity and inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 14

FORMAT: S9(12)V99

VALUES: Acceptable values are 0 through 999999999999.99. No validity checks are made. This field is filled with leading zeros.

IDENTIFIER: Totals: One-Time/Partial Charges/Credits

DESCRIPTION: This field indicates the total one-time charges, partial charges, and/or credit values for a billing period.

DATA TYPE: Numeric

RECORD TYPE: Detail of new charges information for activity and inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 14

FORMAT: S9(12)V99

VALUES: Acceptable values are 0 through 999999999999.99. No validity checks are made. This field is filled with leading zeros.

IDENTIFIER: Totals: Taxes and Fees

DESCRIPTION: This field indicates the total value of taxes and fees for a billing period.

DATA TYPE: Numeric

RECORD TYPE: Detail of new charges information for activity and inventory records

REQUIREMENT: Mandatory

FIELD LENGTH: 9

FORMAT: S9(7)V99

VALUES: Acceptable values are 0 through 9999999.99. No validity checks are made. This field is filled with leading zeros.

IDENTIFIER: Transaction Code

DESCRIPTION: This field identifies the type of bill.

DATA TYPE: Alpha/numeric

RECORD TYPE: Billing records

REQUIREMENT: Mandatory

FIELD LENGTH: 3

FORMAT: No special format

VALUES: Codes allowed on an automated bill are as follows:

PB1 Denotes a new bill. Only 1 "PB1" is allowed per billing cycle.

PBE Refers to billing for equipment leased. Multiple PBEs can occur in a billing cycle. Certain Communications Service Authorization (CSA) numbers are equipment CSAs; these are identified by the prefix in the CSA number.

PBA Denotes an adjustment bill.

COMMENTS: This field is found in columns 043-045 in the current DECCO automated billing format.

IDENTIFIER: Type of Action

DESCRIPTION: This field denotes the type of action taken in an activity record.

DATA TYPE: Alpha/numeric

RECORD TYPE: Activity records

REQUIREMENT: Mandatory

FIELD LENGTH: 1

FORMAT: Format is one character from the list of values below.

VALUES: Acceptable values are:

A Add

C Rate Change

D Disconnect

J Adjustment

M Miscellaneous Charge

R Rehome

S Administration Charge

If this field is filled with a space, it denotes a partial period adjustment.

IDENTIFIER: Uniform Service Ordering Code (USOC)
DESCRIPTION: This field identifies the USOC as established by the Federal Communications Commission (FCC).
DATA TYPE: Alpha/numeric
RECORD TYPE: Activity records
REQUIREMENT: Mandatory
FIELD LENGTH: 12
FORMAT: No special format is required.
VALUES: No validity checks are made.
COMMENTS: Length of this field is currently 6 positions, but 12 positions are actually needed.

IDENTIFIER: Uniform Service Ordering Code (USOC) Nomenclature
DESCRIPTION: This field identifies the USOC English description.
DATA TYPE: Alpha/numeric
RECORD TYPE: Activity records
REQUIREMENT: Mandatory
FIELD LENGTH: 30
FORMAT: No special format is required.
VALUES: No validity checks are made.

IDENTIFIER: Vertical Coordinate of the Serving Wire Center
DESCRIPTION: This field is used with the horizontal coordinate of the serving wire center to calculate mileage/distance between centers in order to determine cost.
DATA TYPE: Numeric
RECORD TYPE: Customer identification information for activity or inventory records
REQUIREMENT: Mandatory
FIELD LENGTH: 7
FORMAT: 9(5)V99
VALUES: No validity checks are made. This field is filled with leading zeros.

APPENDIX B

**DATA DICTIONARY SORTED FIRST
BY IDENTIFIER AND THEN BY RECORD TYPE**

DATA DICTIONARY SORTED FIRST BY IDENTIFIER AND THEN BY RECORD TYPE

Identifier	Record type	Data type	Requirement	Field length
Account Manager Code (AMC)	Header information for activity or inventory records	Alpha/numeric	Mandatory	2
Address of Customer – First Line	Header information for activity or inventory records	Alpha/numeric	Mandatory	50
Address of Customer – Fourth Line	Header information for activity or inventory records	Alpha/numeric	Mandatory	50
Address of Customer – Second Line	Header information for activity or inventory records	Alpha/numeric	Mandatory	50
Address of Customer – Third Line	Header information for activity or inventory records	Alpha/numeric	Mandatory	50
Adjustment Day	Billing records	Numeric	Optional	2
Adjustment Factor	Activity records	Numeric	Mandatory	8
Adjustment Month	Billing records	Numeric	Optional	2
Adjustment Year	Billing records	Numeric	Optional	2
Bell/Independent Company Indicator	Activity or inventory records	Alpha	Mandatory	1
Central Office (CO)	Customer identification information for activity or inventory records	Alpha/numeric	Mandatory	11
Circuit Location (CKL) Number	Customer identification information for activity or inventory records	Alpha/numeric	Mandatory	4
Circuit Number	Billing records and header information and detail of new charges information for activity and inventory records	Alpha/numeric	Mandatory	6
Commercial Circuit Number (CCN)	Header information and detail of new charges information for activity or inventory records	Alpha/numeric	Mandatory	24
Common Language Location Indicator (CLLI) Code	Activity records	Alpha/numeric	Mandatory	11
Communications Service Authorization (CSA) Number	Header information and detail of new charges information for activity or inventory records and billing records	Alpha/numeric	Mandatory	20
Effective Date	Inventory records	Numeric	Mandatory	6

DATA DICTIONARY SORTED FIRST BY IDENTIFIER AND THEN BY RECORD TYPE

Identifier	Record type	Data type	Requirement	Field length
Exchange (NNX)	Customer identification information for activity or inventory records	Numeric	Mandatory	3
Horizontal Coordinate of the Serving Wire Center (SWC)	Customer identification information for activity or inventory records	Numeric	Mandatory	7
Individual Responsibility Code (IRC)	Billing records	Alpha/numeric	Optional	2
Interstate/Intrastate Identifier	Header information and detail of charges information for activity or inventory records	Alpha/numeric	Mandatory	1
Invoice Date	Header information and detail of new charges information for activity or inventory records	Numeric	Mandatory	6
Item Number	Activity and inventory records	Alpha/numeric	Mandatory	6
Local Access Transport Area (LATA)	Customer identification information for activity or inventory records	Alpha/numeric	Mandatory	4
Mileage	Activity records	Numeric	Mandatory	5
Money Fields	Billing records	Alpha/numeric	Mandatory	100
Monthly Charge	Activity and inventory records	Numeric	Mandatory	11
Name of Customer	Customer identification information for activity or inventory records	Alpha/numeric	Mandatory	50
Numbering Plan Area (NPA)	Customer identification information for activity or inventory records	Alpha/numeric	Mandatory	3
One-Time/Partial Charges/Credits	Activity records	Numeric	Mandatory	14
Period From	Detail of new charges information for activity and inventory records	Numeric	Mandatory	6
Period To	Detail of new charges information for activity and inventory records	Numeric	Mandatory	6
Prefix	Billing records	Alpha/numeric	Mandatory	3

DATA DICTIONARY SORTED FIRST BY IDENTIFIER AND THEN BY RECORD TYPE

Identifier	Record type	Data type	Requirement	Field length
Quantity	Activity and inventory records	Numeric	Mandatory	5
Service Charge	Activity records	Numeric	Mandatory	14
Service Description	Header information for activity or inventory records	Alpha	Mandatory	30
Service Order (SO) Number	Detail of new charges information for activity and inventory records	Alpha/numeric	Mandatory	11
Serving Wire Center (SWC)	Customer identification information for activity or inventory records	Alpha/numeric	Mandatory	11
Start Date	Header information for activity or inventory records	Numeric	Mandatory	6
Suffix	Billing records	Alpha/numeric	Mandatory	3
Telephone Company Code	Billing records	Alpha	Mandatory	4
Telephone Company Use	Billing records	Alpha/numeric	Optional	6
To-Day	Billing records	Numeric	Mandatory	2
To-Month	Billing records	Numeric	Mandatory	2
To-Year	Billing records	Numeric	Mandatory	2
Total Net Change	Activity records	Numeric	Mandatory	14
Total New Charges, Taxes, and Fees	Detail of new charges information for activity and inventory records	Numeric	Mandatory	14
Totals: Monthly Charge	Detail of new charges information for activity and inventory records	Numeric	Mandatory	14
Totals: One-Time/Partial Charges/Credits	Detail of new charges information for activity and inventory records	Numeric	Mandatory	14
Totals: Taxes and Fees	Detail of new charges information for activity and inventory records	Numeric	Mandatory	9
Transaction Code	Billing records	Alpha/numeric	Mandatory	3
Type	Billing records	Alpha	Mandatory	4
Type of Action	Activity records	Alpha/numeric	Mandatory	1
Uniform Service Ordering Code (USOC)	Activity records	Alpha/numeric	Mandatory	12

DATA DICTIONARY SORTED FIRST BY IDENTIFIER AND THEN BY RECORD TYPE

Identifier	Record type	Data type	Requirement	Field length
Uniform Service Ordering Code (USOC) Nomenclature	Activity records	Alpha/numeric	Mandatory	30
Vertical Coordinate of the Serving Wire Center	Customer identification information for activity or inventory records	Numeric	Mandatory	7

APPENDIX C

**DATA DICTIONARY SORTED FIRST
BY RECORD TYPE AND THEN BY IDENTIFIER**

DATA DICTIONARY SORTED FIRST BY RECORD TYPE AND THEN BY IDENTIFIER

Record type	Identifier	Data type	Requirement	Field length
Activity and inventory records	Item Number	Alpha/numeric	Mandatory	6
Activity and inventory records	Monthly Charge	Numeric	Mandatory	11
Activity and inventory records	Quantity	Numeric	Mandatory	5
Activity or inventory records	Bell/Independent Company Indicator	Alpha	Mandatory	1
Activity records	Adjustment Factor	Numeric	Mandatory	8
Activity records	Common Language Location Indicator (CLLI) Code	Alpha/numeric	Mandatory	11
Activity records	Mileage	Numeric	Mandatory	5
Activity records	One-Time/Partial Charges/Credits	Numeric	Mandatory	14
Activity records	Service Charge	Numeric	Mandatory	14
Activity records	Total Net Change	Numeric	Mandatory	14
Activity records	Type of Action	Alpha/numeric	Mandatory	1
Activity records	Uniform Service Ordering Code (USOC)	Alpha/numeric	Mandatory	12
Activity records	Uniform Service Ordering Code (USOC) Nomenclature	Alpha/numeric	Mandatory	30
Billing records	Adjustment Day	Numeric	Optional	2
Billing records	Adjustment Month	Numeric	Optional	2
Billing records	Adjustment Year	Numeric	Optional	2
Billing records	Individual Responsibility Code (IRC)	Alpha/numeric	Optional	2
Billing records	Money Fields	Alpha/numeric	Mandatory	100
Billing records	Prefix	Alpha/numeric	Mandatory	3
Billing records	Suffix	Alpha/numeric	Mandatory	3
Billing records	Telephone Company Code	Alpha	Mandatory	4
Billing records	Telephone Company Use	Alpha/numeric	Optional	6
Billing records	To-Day	Numeric	Mandatory	2
Billing records	To-Month	Numeric	Mandatory	2
Billing records	To-Year	Numeric	Mandatory	2
Billing records	Transaction Code	Alpha/numeric	Mandatory	3

DATA DICTIONARY SORTED FIRST BY RECORD TYPE AND THEN BY IDENTIFIER

Record type	Identifier	Data type	Requirement	Field length
Billing records	Type	Alpha	Mandatory	4
Billing records and header information and detail of new charges information for activity and inventory records	Circuit Number	Alpha/numeric	Mandatory	6
Customer identification information for activity or inventory records	Central Office (CO)	Alpha/numeric	Mandatory	11
Customer identification information for activity or inventory records	Circuit Location (CKL) Number	Alpha/numeric	Mandatory	4
Customer identification information for activity or inventory records	Exchange (NNX)	Numeric	Mandatory	3
Customer identification information for activity or inventory records	Horizontal Coordinate of the Serving Wire Center (SWC)	Numeric	Mandatory	7
Customer identification information for activity or inventory records	Local Access Transport Area (LATA)	Alpha/numeric	Mandatory	4
Customer identification information for activity or inventory records	Name of Customer	Alpha/numeric	Mandatory	50
Customer identification information for activity or inventory records	Numbering Plan Area (NPA)	Alpha/numeric	Mandatory	3
Customer identification information for activity or inventory records	Serving Wire Center (SWC)	Alpha/numeric	Mandatory	11
Customer identification information for activity or inventory records	Vertical Coordinate of the Serving Wire Center	Numeric	Mandatory	7
Detail of new charges information for activity and inventory records	Period From	Numeric	Mandatory	6
Detail of new charges information for activity and inventory records	Period To	Numeric	Mandatory	6
Detail of new charges information for activity and inventory records	Service Order (SO) Number	Alpha/numeric	Mandatory	11
Detail of new charges information for activity and inventory records	Total New Charges, Taxes, and Fees	Numeric	Mandatory	14

DATA DICTIONARY SORTED FIRST BY RECORD TYPE AND THEN BY IDENTIFIER

Record type	Identifier	Data type	Requirement	Field length
Detail of new charges information for activity and inventory records	Totals: Monthly Charge	Numeric	Mandatory	14
Detail of new charges information for activity and inventory records	Totals: One-Time/Partial Charges/Credits	Numeric	Mandatory	14
Detail of new charges information for activity and inventory records	Totals: Taxes and Fees	Numeric	Mandatory	9
Header information and detail of charges information for activity or inventory records	Interstate/Intrastate Identifier	Alpha/numeric	Mandatory	1
Header information and detail of new charges information for activity or inventory records	Commercial Circuit Number (CCN)	Alpha/numeric	Mandatory	24
Header information and detail of new charges information for activity or inventory records	Invoice Date	Numeric	Mandatory	6
Header information and detail of new charges information for activity or inventory records and billing records	Communications Service Authorization (CSA) Number	Alpha/numeric	Mandatory	20
Header information for activity or inventory records	Account Manager Code (AMC)	Alpha/numeric	Mandatory	2
Header information for activity or inventory records	Address of Customer – First Line	Alpha/numeric	Mandatory	50
Header information for activity or inventory records	Address of Customer – Fourth Line	Alpha/numeric	Mandatory	50
Header information for activity or inventory records	Address of Customer – Second Line	Alpha/numeric	Mandatory	50
Header information for activity or inventory records	Address of Customer – Third Line	Alpha/numeric	Mandatory	50
Header information for activity or inventory records	Service Description	Alpha	Mandatory	30
Header information for activity or inventory records	Start Date	Numeric	Mandatory	6
Inventory records	Effective Date	Numeric	Mandatory	6

APPENDIX D

**DRAFT DECCO CONVENTION FOR TRANSACTION SET 811,
CONSOLIDATED SERVICE INVOICE/STATEMENT**

811 Consolidated Service Invoice/Statement

This Draft Standard for Trial Use contains the format and establishes the data contents of the Consolidated Services Invoice/Statement Transaction Set (811) for use within the context of an Electronic Data Interchange (EDI) environment. The transaction set can be used to provide for the billing of complex and structured service invoice detail.

This standard can be used by organizations who are interested in sending or receiving either consolidated or standalone invoices for service arrangements which require processing other than that of the typical product invoice. An example of its use would be the exchange of telecommunications services invoices that require mechanical auditing prior to payment.

The Consolidated Services Invoice/Statement can be used as a credit/debit memo to differentiate between payable invoice items and information-only memo items. This transaction set should not be used as a standalone notification of a credit/debit adjustment.

Table 1

PAGE #	POS. #	SEG. ID	NAME	REQ. DES.	MAX USE	LOOP REPEAT
6	010	ST	Transaction Set Header	M	1	
7	020	BIG	Beginning Segment for Invoice	M	1	
8	030	NTE	Note/Special Instruction	O	100	
N/U	040	CUR	Currency	O	1	
9	050	REF	Reference Numbers	O	>1	
N/U	060	PER	Administrative Communications Contact	O	3	
N/U	070	ITD	Terms of Sale/Deferred Terms of Sale	O	5	
10	080	DTM	Date/Time Reference	O	10	
N/U	090	TXI	Tax Information	O	>1	
LOOP ID - N1						
N/U	100	N1	Name	O	1	>1
N/U	110	N2	Additional Name Information	O	2	
N/U	120	N3	Address Information	O	2	
N/U	130	N4	Geographic Location	O	1	
N/U	140	REF	Reference Numbers	O	12	
N/U	150	PER	Administrative Communications Contact	O	3	

Table 2

PAGE #	POS. #	SEG. ID	NAME	REQ. DES.	MAX USE	LOOP REPEAT
LOOP ID - HL						
11	010	HL	Hierarchical Level	M	1	>1
LOOP ID - LX						
N/U	020	LX	Assigned Number	O	1	>1
N/U	025	VEH	Vehicle Information	O	1	
13	030	SI	Service Characteristic Identification	O	2	
N/U	040	PID	Product/Item Description	O	200	
N/U	045	MEA	Measurements	O	20	
N/U	050	REF	Reference Numbers	O	>1	
N/U	060	AMT	Monetary Amount	O	5	
N/U	070	DTM	Date/Time Reference	O	4	
N/U	080	TXI	Tax Information	O	>1	
LOOP ID - QTY						
N/U	090	QTY	Quantity	O	1	10
N/U	100	SI	Service Characteristic Identification	O	1	
LOOP ID - N1						
15	110	N1	Name	O	1	1
N/U	120	N2	Additional Name Information	O	2	
16	130	N3	Address Information	O	2	
17	140	N4	Geographic Location	O	1	
18	150	REF	Reference Numbers	O	2	
N/U	160	PER	Administrative Communications Contact	O	>1	
N/U	170	TXI	Tax Information	O	>1	
LOOP ID - ITA						
N/U	180	ITA	Allowance, Charge or Service	O	1	>1
N/U	190	DTM	Date/Time Reference	O	1	
N/U	200	TXI	Tax Information	O	>1	
LOOP ID - IT1						
19	210	IT1	Baseline Item Data (Invoice)	O	1	999999
N/U	220	SI	Service Characteristic Identification	O	2	
N/U	230	PID	Product/Item Description	O	200	
N/U	235	MEA	Measurements	O	20	
N/U	240	INC	Installment Information	O	1	
21	250	TXI	Tax Information	O	>1	
N/U	260	REF	Reference Numbers	O	1	
N/U	270	DTM	Date/Time Reference	O	10	
N/U	280	MSG	Message Text	O	>1	

22	285	AMT	Monetary Amount	O	1	
		LOOP ID - QTY				>1
N/U	290	QTY	Quantity	O	1	
N/U	300	SI	Service Characteristic Identification	O	1	
		LOOP ID - ITA				10
23	310	ITA	Allowance, Charge or Service	O	1	
N/U	320	DTM	Date/Time Reference	O	1	
N/U	330	TXI	Tax Information	O	>1	
		LOOP ID - N1				>1
N/U	340	N1	Name	O	1	
N/U	350	N2	Additional Name Information	O	2	
N/U	360	N3	Address Information	O	2	
N/U	370	N4	Geographic Location	O	1	
N/U	380	PER	Administrative Communications Contact	O	3	
		LOOP ID - SLN				>1
N/U	390	SLN	Subline Item Detail	O	1	
N/U	400	SI	Service Characteristic Identification	O	2	
N/U	410	PID	Product/Item Description	O	200	
N/U	415	MEA	Measurements	O	20	
N/U	420	CUR	Currency	O	1	
N/U	430	INC	Installment Information	O	1	
N/U	440	ITA	Allowance, Charge or Service	O	10	
N/U	450	TXI	Tax Information	O	>1	
N/U	460	REF	Reference Numbers	O	>1	
N/U	470	PER	Administrative Communications Contact	O	3	
N/U	480	DTM	Date/Time Reference	O	10	
N/U	490	AMT	Monetary Amount	O	10	
N/U	500	MSG	Message Text	O	>1	
		LOOP ID - QTY				>1
N/U	510	QTY	Quantity	O	1	
N/U	520	SI	Service Characteristic Identification	O	1	
		LOOP ID - N1				>1
N/U	530	N1	Name	O	1	
N/U	540	N2	Additional Name Information	O	2	
N/U	550	N3	Address Information	O	2	
N/U	560	N4	Geographic Location	O	1	
N/U	570	REF	Reference Numbers	O	2	
N/U	580	PER	Administrative Communications Contact	O	3	
		LOOP ID - TCD				>1
N/U	590	TCD	Itemized Call Detail	O	1	

N/U 600	SI	Service Characteristic Identification	O	2
N/U 610	TXI	Tax Information	O	>1
LOOP ID - USD				>1
N/U 620	USD	Usage Sensitive Detail	O	1
N/U 630	ITA	Allowance, Charge or Service	O	2
N/U 640	TRF	Rating Factors	O	18
LOOP ID - QTY				>1
N/U 650	QTY	Quantity	O	1
N/U 660	SI	Service Characteristic Identification	O	1

Table 3

PAGE #	POS. #	SEG. ID	NAME	REQ. DES.	MAX USE	LOOP REPEAT
26	010	TDS	Total Monetary Value Summary	M	1	
LOOP ID - ITA						>1
27	020	ITA	Allowance, Charge or Service	O	1	
N/U	030	DTM	Date/Time Reference	O	1	
LOOP ID - BAL						>1
N/U	040	BAL	Balance Detail	O	1	
N/U	050	DTM	Date/Time Reference	O	1	
LOOP ID - N1						>1
N/U	060	N1	Name	O	1	
LOOP ID - BAL						>1
N/U	070	BAL	Balance Detail	O	1	
N/U	080	DTM	Date/Time Reference	O	1	
LOOP ID - ITA						>1
N/U	090	ITA	Allowance, Charge or Service	O	1	
N/U	100	DTM	Date/Time Reference	O	1	
N/U	110	CTT	Transaction Totals	O	1	
29	120	SE	Transaction Set Trailer	M	1	

NOTES:

2/010 Valid codes for HL03 to define levels for this transaction set are given below: 1 - Service/Billing Provider (Identifies the Company Providing the Service/Billing) 2 - Billing Arrangement (Identifies a Specific Billing Arrangement) 3 - Sub-billing Arrangement (Identifies a More Detailed Billing Arrangement) 4 - Group (Identifies a Group of Charges on the Bill) 5 - Category (Identifies the Subdivision of the Group) 6 - Subcategory (Identifies a Further Breakdown of the Category) 7 - Type (Identifies a Further Breakdown of the Subcategory) 8 - Charge Detail (Identifies the Lowest Level of Charges within a Billing Arrangement) 9 - Line Detail (Identifies the Supporting Detail Associated with the Charge or Group Level) They must be used in the (hierarchical) order in which they are listed;

however, certain levels are optional and may be omitted. At least one occurrence each of the service/billing provider level and group level is required.

2/110 The service/billing provider level is defined by the N1 loop.

2/210 The group level is defined by at least one occurrence of the IT1 loop which may only appear at the group level.

2/390 The SLN loop may only appear at the charge detail level.

2/590 The TCD loop may only appear at the line detail level.

2/620 The USD loop may only appear at the line detail level.

3/110 The number of line items (CTT01) is the accumulation of the number of IT1 segments.

Mandatory

Segment: ST Transaction Set Header

Level: Header

Loop: ____

Usage: Mandatory

Max Use: 1

Purpose: To indicate the start of a transaction set and to assign a control number

Semantic: The transaction set identifier (ST01) used by the translation routines of the interchange partners to select the appropriate transaction set definition (e.g., 810 selects the invoice transaction set).

Data Element Summary

Mandatory

REF. DES	DATA ELEMENT	NAME	ATTRIBUTES		
ST01	143	Transaction Set Identifier Code Code uniquely identifying a Transaction Set.	M	ID	3/3
	811	X12.39 Consolidated Service Invoice/Statement			
ST02	329	Transaction Set Control Number Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set	M	AN	4/9

Mandatory

Implementation Note:

Unique number originated by billing provider to identify each EDI transaction (repeated in SE02).

Segment: **BIG** Beginning Segment for Invoice
Level: Header
Loop: ____
Usage: Mandatory
Max Use: 1
Purpose: To indicate the beginning of an invoice transaction set and to transmit identifying numbers and dates.
Comment: BIG07 is used only to further define the type of invoice when needed.

Data Element Summary

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES		
Mandatory	BIG01	245	Invoice Date Invoice Issue Date.	M	DT	6/6
Mandatory	BIG02	76	Invoice Number Identifying number assigned by issuer.	M	AN	1/22
Not Used	BIG03	323	Purchase Order Date	O	DT	6/6
Not Used	BIG04	324	Purchase Order Number	O	AN	1/22
Not Used	BIG05	328	Release Number	O	AN	1/30
Not Used	BIG06	327	Change Order Sequence Number	O	AN	1/8
Required	BIG07	640	Transaction Type Code Code specifying the type of transaction.	O	ID	2/2
Required			FB Final Bill			
Required			RG Revised Final Bill			
Required			SA Stand-alone Lease Schedule			
Not Used	BIG08	353	Transaction Set Purpose Code	O	ID	2/2
Not Used	BIG09	306	Action Code	O	ID	1/1

Optional	Segment: NTE Note/Special Instruction
	Level: Header
	Loop: _____
	Usage: Optional
	Max Use: 100
	Purpose: To transmit information in a free-form format, if necessary, for comment or special instruction
	Comment: The NTE segment permits free-form information/data which, under ANSI X12 standard implementations, is not machine processable. The use of the "NTE" segment should therefore be avoided, if at all possible, in an automated environment.

Data Element Summary

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
Optional	NTE01	363	Note Reference Code Code identifying the functional area or purpose for which the note applies.	O ID 3/3
Required		GEN	Entire Transaction Set	
Mandatory	NTE02	3	Free Form Message Free-form text.	M AN 1/60

Implementation Note:
Free-form text for telephone company use

Segment: REF Reference Numbers**Level:** Header**Loop:** ____**Required****Usage:** Optional**Max Use:** >1**Purpose:** To specify identifying numbers.**Syntax:** R0203 — At least one of REF02 or REF03 is required.**Data Element Summary**

	REF DES.	DATA ELEMENT	NAME	ATTRIBUTES
Mandatory	REF01	128	Reference Number Qualifier Code qualifying the Reference Number.	M ID 2/2

Implementation Note:

Five REF segments are required to provide the Account Manager Code, Circuit Number, Individual Responsibility Code, Type and Grade of Service, and Communications Service Authorization Number.

Required	10	Account Managers Code
Required	CR	Customer Reference Number
Required	GC	Government Contract Number
Required	QY	Service Performed Code
Required	TA	Telecommunication Circuit Supplemental ID
Required	VR	Vendor ID Number

Required	REF02	127	Reference Number Reference number or identification number as defined for a particular Transaction Set, or as specified by the Reference Number Qualifier.	C AN 1/30
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Implementation Notes:

1. If REF01 equals 10, enter Account Manager Code in REF02.
2. If REF01 equals VR, enter the Individual Responsibility Code in REF02.
3. If REF02 equals GC, enter Communications Service Authorization Number in REF02.
4. If REF01 equals TA, enter Circuit Number in REF02.
5. If REF01 equals QY, enter Type and Grade of Service in REF02 and Service Description in REF03.

Conditional	REF03	352	Description A free-form description to clarify the related data elements and their content.	C AN 1/80
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Implementation Note:

Put service description in this field.

Required

Segment: DTM Date/Time Reference
Level: Header
Loop: _____
Usage: Optional
Max Use: 10
Purpose: To specify pertinent dates and times
Syntax: R0203 — At least one of DTM02 or DTM03 is required.

Data Element Summary

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES		
Mandatory	DTM01	374	Date/Time Qualifier Code specifying type of date or time, or both date and time.	M	ID	3/3
	Implementation Note: Three DTM segments are required to provide the To-Day, Adjustment Day, and Start Date.					
Required		007	Effective			
Required		154	Adjustment Period Start			
Required		194	Period End			
Required	DTM02	373	Date Date (YYMMDD).	C	DT	6/6
	Implementation Notes: 1. If DTM01 equals 007, enter Start Date in DTM02. 2. If DTM01 equals 154, enter Adjustment Day in DTM06. 3. If DTM01 equals 194, enter To-Day in DTM02.					
Not Used	DTM03	337	Time	C	TM	4/6
Not Used	DTM04	623	Time Code	O	ID	2/2
Not Used	DTM05	624	Century	O	NO	2/2

Mandatory

Segment: HL Hierarchical Level**Level:** Detail**Loop:** HL **Repeat:** >1**Usage:** Mandatory**Max Use:** 1**Purpose:** To identify dependencies among and the content of hierarchically related groups of data segments.**Comments:** 1. The HL Segment is used to identify levels of detail information using a Hierarchical Structure, such as relating line item data to shipment data, and packaging data to line item data.

2. The HL segment defines a top-down/left-right ordered structure.

3. HL01 shall contain a unique alphanumeric number for each occurrence of the HL segment in the transaction set. For example HL01 could be used to indicate the number of occurrences of the HL segment, in which case the value of HL01 would be "1" for the initial HL segment, and would be incremented by one in each subsequent HL segment within the transaction.

4. HL02 identifies the Hierarchical ID Number of the HL segment to which the current HL segment is subordinate.

5. HL03 indicates the context of the series of segments following the current HL segment up to the next occurrence of an HL segment in the transaction. For example, HL03 is used to indicate that subsequent segments in the HL loop form a logical grouping of data referring to shipment, order or item level information.

6. HL04 indicates whether or not there are subordinate (or child) HL segments related to the current HL segment.

Implementation Notes:*1. The 811 uses hierarchical levels (HL loops) to organize the billing details. HL loop structure is multi-use and varies in content based on its use.**The HL Segment is the first data segment in the loop and defines the use of the HL loop and its relationship to other HL loops. Each new hierarchical loop starts with an HL segment which is uniquely identified by the value in reference designator HL01. Reference designator HL02 identifies its parent HL ID number, if any. Reference designator HL03 identifies the hierarchical level. Reference designator HL04 is used to identify if a subordinate HL loop follows.***2. HL(1) Detail Service Provider Level 1***At least one occurrence of HL level 1 is required for each 811. This level identifies the company providing the billing and/or service, and depicts special charges, allowances, and credits which apply to this company.***3. HL(4) Detail Group Level 4***At least one occurrence of HL level 4 is required for each 811. This level is used to display the group charges for services and equipment being billed and comes before the first IT1 segment.***Data Element Summary**

REF DES	DATA ELEMENT	NAME	ATTRIBUTES
Mandatory	HL01	628 Hierarchical ID Number	M AN 1/12

			A unique number assigned by the sender to identify a particular data segment in a hierarchical structure.		
			Implementation Note: For HL(1), HL01 is equal to "1." For HL(4), HL01 is equal to "2."		
Optional	HL02	734	Hierarchical Parent ID Number Identification number of the next higher hierarchical data segment that the data segment being described is subordinate to.	O AN	1/12
			Implementation Note: For HL(1), HL02 is not used. For HL(4), HL02 is equal to "1."		
Mandatory	HL03	735	Hierarchical Level Code Code defining the characteristic of a level in a hierarchical structure.	M ID	1/2
			Implementation Note: For HL(1), HL03 is equal to "1." For HL(4), HL03 is equal to "4."		
Optional	HL04	736	Hierarchical Child Code Code indicating whether if there are hierarchical child data segments subordinate to the level being described.	O ID	1/1
			Implementation Note: For HL(1), HL04 is equal to "1." For HL(4), HL04 is equal to "0."		

Required

Segment: SI Service Characteristic Identification

Level: Detail

Loop: LX

Usage: Optional

Max Use: 2

Purpose: To specify service characteristic data

Syntax: 1. P0405 — If either SI04 or SI05 is present, then the other is required.
2. P0607 — If either SI06 or SI07 is present, then the other is required.
3. P0809 — If either SI08 or SI09 is present, then the other is required.
4. P1011 — If either SI10 or SI11 is present, then the other is required.
5. P1213 — If either SI12 or SI13 is present, then the other is required.
6. P1415 — If either SI14 or SI15 is present, then the other is required.
7. P1617 — If either SI16 or SI17 is present, then the other is required.
8. P1819 — If either SI18 or SI19 is present, then the other is required.
9. P2021 — If either SI20 or SI21 is present, then the other is required.

Comment: SI01 defines the source for each of the service characteristics qualifiers.

Data Element Summary

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES		
Mandatory	SI01	559	Agency Qualifier Code Code identifying the agency assigning the code values.	M	ID	2/2
Required			TI Telecommunications Industry			
Mandatory	SI02	1000	Service Characteristics Qualifier Code from an industry code list qualifying the type of service characteristics.	M	ID	2/2
			Implementation Note: Enter "CC."			
Mandatory	SI03	234	Product/Service ID Identifying number for a product or service.	M	AN	1/30
			Implementation Note: Enter Circuit Location (CKL) Number.			
Required	SI04	1000	Service Characteristics Qualifier Code from an industry code list qualifying the type of service characteristics.	C	ID	2/2
			Implementation Note: Enter "LS."			
Required	SI05	234	Product/Service ID Identifying number for a product or service.	C	AN	1/30
			Implementation Note: Enter Numbering Plan Area (NAP) - Exchange (NPX).			
Required	SI06	1000	Service Characteristics Qualifier	C	ID	2/2

	Code from an industry code list qualifying the type of service characteristics.				
	Implementation Note: Enter "LO."				
Required	SI07	234	Product/Service ID	C AN	1/30
	Identifying number for a product or service.				
	Implementation Note: Enter Serving Wire Center (SWC).				
Required	SI08	1000	Service Characteristics Qualifier	C ID	2/2
	Code from an industry code list qualifying the type of service characteristics.				
	Implementation Note: Enter "IC."				
Required	SI09	234	Product/Service ID	C AN	1/30
	Identifying number for a product or service.				
	Implementation Note: Enter Central Office (CO).				
Required	SI10	1000	Service Characteristics Qualifier	C ID	2/2
	Code from an industry code list qualifying the type of service characteristics.				
	Implementation Note: Enter "LA."				
Required	SI11	234	Product/Service ID	C AN	1/30
	Identifying number for a product or service.				
	Implementation Note: Enter Local Access Transport Area (LATA).				
Not Used	SI12	1000	Service Characteristics Qualifier	C ID	2/2
Not Used	SI13	234	Product/Service ID	C AN	1/30
Not Used	SI14	1000	Service Characteristics Qualifier	C ID	2/2
Not Used	SI15	234	Product/Service ID	C AN	1/30
Not Used	SI16	1000	Service Characteristics Qualifier	C ID	2/2
Not Used	SI17	234	Product/Service ID	C AN	1/30
Not Used	SI18	1000	Service Characteristics Qualifier	C ID	2/2
Not Used	SI19	234	Product/Service ID	C AN	1/30
Not Used	SI20	1000	Service Characteristics Qualifier	C ID	2/2
Not Used	SI21	234	Product/Service ID	C AN	1/30

Required

Segment: N1 Name
Level: Detail
Loop: N1 **Repeat:** 1
Usage: Optional
Max Use: 1
Purpose: To identify a party by type of organization, name and code
Syntax: 1. R0203 — At least one of N102 or N103 is required.
2. P0304 — If either N103 or N104 is present, then the other is required.
Comment: This segment, used alone, provides the most efficient method of providing organizational identification. To obtain this efficiency the "ID Code" (N104) must provide a key to the table maintained by the transaction processing party.

Data Element Summary

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES		
Mandatory	N101	98	Entity Identifier Code Code identifying an organizational entity, a physical location, or an individual	M	ID	2/2
Required		SV	Service Performance Site			
Required	N102	93	Name Free-form name.	C	AN	1/35
Not Used	N103	66	Identification Code Qualifier	C	ID	1/2
Not Used	N104	67	Identification Code	C	AN	2/17

Required

Segment: N3 Address Information

Level: Detail

Loop: N1

Usage: Optional

Max Use: 2

Purpose: To specify the location of the named party

Data Element Summary

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES
Mandatory	N301	166	Address Information Address information	M AN 1/35
Optional	N302	166	Address Information Address information	O AN 1/35

Required

Segment: N4 Geographic Location

Level: Detail

Loop: N1

Usage: Optional

Max Use: 1

Purpose: To specify the geographic place of the named party

Syntax: 1. R0105 — At least one of N401 or N405 is required.

2. P0506 — If either N405 or N406 is present, then the other is required.

Comments: 1. A combination of either N401 through N404 (or N405 and N406) may be adequate to specify a location.

2. N402 is required only if city name (N401) is in the USA or Canada.

Data Element Summary

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES		
Required	N401	19	City Name Free-form text for city name.	C	AN	2/30
Required	N402	156	State or Province Code Code (Standard State/Province) as defined by appropriate government agency.	O	ID	2/2
Required	N403	116	Postal Code Code defining international postal zone code excluding punctuation and blanks (zip code for United States).	O	ID	3/9
Required	N404	26	Country Code Code identifying the country.	O	ID	2/3
Not Used	N405	309	Location Qualifier	C	ID	1/2
Not Used	N406	310	Location Identifier	C	AN	1/25

Required

Segment: REF Reference Numbers
Level: Detail
Loop: N1
Usage: Optional
Max Use: 2
Purpose: To specify identifying numbers.
Syntax: R0203 — At least one of REF02 or REF03 is required.

Data Element Summary

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES		
Mandatory	REF01	128	Reference Number Qualifier Code qualifying the Reference Number.	M	ID	2/2
Required		13	Horizontal Coordinate			
Required		15	Vertical Coordinate			
Required	REF02	127	Reference Number Reference number or identification number as defined for a particular Transaction Set, or as specified by the Reference Number Qualifier.	C	AN	1/30
Implementation Note: Two REF segments provide the Vertical and Horizontal Coordinates of the Serving Wire Center (SWC).						
Not Used	REF03	352	Description	C	AN	1/80

Required

Segment: IT1 Baseline Item Data (Invoice)**Level:** Detail**Loop:** IT1 **Repeat:** 999999**Usage:** Optional**Max Use:** 1**Purpose:** To specify the basic and most frequently used line item data for the invoice and related transactions.

Syntax:

1. C0607 — If IT106 is present, then IT107 is required.
2. C0809 — If IT108 is present, then IT109 is required.
3. C1011 — If IT110 is present, then IT111 is required.
4. C1213 — If IT112 is present, then IT113 is required.
5. C1415 — If IT114 is present, then IT115 is required.
6. C1617 — If IT116 is present, then IT117 is required.
7. C1819 — If IT118 is present, then IT119 is required.
8. C2021 — If IT120 is present, then IT121 is required.
9. C2223 — If IT122 is present, then IT123 is required.
10. C2425 — If IT124 is present, then IT125 is required.

Semantic: IT101 is the purchase order line item identification.

Comments: 1. Element 235/234 combinations should be interpreted to include products and/or services. See the Data Dictionary for a complete list of ID's.

2. IT106 through IT125 provides for ten (10) different product/service ID's for each item. For example: Case, Color, Drawing No., UPC No., ISBN No., Model No., SKU.

Data Element Summary

	REF DES.	DATA ELEMENT	NAME	ATTRIBUTES
Optional	IT101	350	Assigned Identification Alphanumeric characters assigned for differentiation within a transaction set.	O AN 1/11
Mandatory	IT102	358	Quantity Invoiced Number of units invoiced (supplier units).	M R 1/10
Mandatory	IT103	355	Unit or Basis for Measurement Code Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken	M ID 2/2
Implementation Note: Enter "DH."				
Mandatory	IT104	212	Unit Price Price per unit of product, service, commodity, etc.	M R 1/14

Implementation Note: <i>The Unit Price may be a group total or single unit price.</i>					
Optional	IT105	639	Basis of Unit Price Code Code identifying the type of unit price for an item.	O ID	2/2
Required	IT106	235	Product/Service ID Qualifier Code identifying the type/source of the descriptive number used in Product/Service ID (234).	O ID	2/2
Implementation Note: <i>If IT106 is "TY," then enter USOC in IT107.</i> <i>If IT106 is "SV," then enter one of the codes listed for IT107.</i>					
Required	IT107	234	Product/Service ID Identifying number for a product or service.	C AN	1/30
Not Used	IT108	235	Product/Service ID Qualifier	O ID	2/2
Not Used	IT109	234	Product/Service ID	C AN	1/30
Not Used	IT110	235	Product/Service ID Qualifier	O ID	2/2
Not Used	IT111	234	Product/Service ID	C AN	1/30
Not Used	IT112	235	Product/Service ID Qualifier	O ID	2/2
Not Used	IT113	234	Product/Service ID	C AN	1/30
Not Used	IT114	235	Product/Service ID Qualifier	O ID	2/2
Not Used	IT115	234	Product/Service ID	C AN	1/30
Not Used	IT116	235	Product/Service ID Qualifier	O ID	2/2
Not Used	IT117	234	Product/Service ID	C AN	1/30
Not Used	IT118	235	Product/Service ID Qualifier	O ID	2/2
Not Used	IT119	234	Product/Service ID	C AN	1/30
Not Used	IT120	235	Product/Service ID Qualifier	O ID	2/2
Not Used	IT121	234	Product/Service ID	C AN	1/30
Not Used	IT122	235	Product/Service ID Qualifier	O ID	2/2
Not Used	IT123	234	Product/Service ID	C AN	1/30
Not Used	IT124	235	Product/Service ID Qualifier	O ID	2/2
Not Used	IT125	234	Product/Service ID	C AN	1/30

Required

Segment: TXI Tax Information

Level: Detail

Loop: IT1

Usage: Optional

Max Use: >1

Purpose: To specify tax information.

Syntax: 1. R020306 — At least one of TXI02, TXI03 or TXI06 is required.

2. P0405 — If either TXI04 or TXI05 is present, then the other is required.

3. C0803 — If TXI08 is present, then TXI03 is required.

Comments: 1. TXI02 is the monetary amount of the tax.

2. TXI03 is the tax percent expressed as a decimal.

3. If TXI02 is not used, then the application of the percent (TXI03) is between trading partners.

Data Element Summary

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES		
Mandatory	TXI01	963	Tax Type Code Code specifying the type of tax.	M	ID	2/2
Required			TX All Taxes			
Required	TXI02	782	Monetary Amount Monetary amount.	C	R	1/15
Not Used	TXI03	954	Percent	C	R	1/10
Not Used	TXI04	955	Tax Jurisdiction Code Qualifier	C	ID	2/2
Not Used	TXI05	956	Tax Jurisdiction Code	C	AN	1/10
Not Used	TXI06	441	Tax Exempt Code	C	ID	1/1
Not Used	TXI07	662	Price Relationship Code	O	ID	1/1
Optional	TXI08	828	Dollar Basis For Percent Dollar basis to be used in the percent calculation of the allowance, charge or tax	O	R	1/9

Optional

Segment: **AMT** Monetary Amount

Level: Detail

Loop: IT1

Usage: Optional

Max Use: 1

Purpose: To indicate the total monetary amount.

Data Element Summary

	REF DES.	DATA ELEMENT	NAME	ATTRIBUTES		
Mandatory	AMT01	522	Amount Qualifier Code Code to qualify amount	M	ID	1/2
Mandatory	AMT02	782	Monetary Amount Monetary amount.	M	R	1/15

Required

Segment: **ITA Allowance, Charge or Service**

Level: Detail

Loop: ITA **Repeat:** 10

Usage: Optional

Max Use: 1

Purpose: To specify allowances, charges or services

Syntax: 1. L02031314 — If ITA02 is present, then at least one of ITA03, ITA13 or ITA14 are required.
2. C0809 — If ITA08 is present, then ITA09 is required.
3. C1011 — If ITA10 is present, then ITA11 is required.
4. C1502 — If ITA15 is present, then ITA02 is required.

Semantic: ITA12 is the quantity of free goods.

Comments: 1. If ITA01 = A-Allowance or C-Charge, then at least one of ITA06, ITA07, or ITA08 must be present.
2. ITA02 identifies the source of the code value in ITA03 or ITA14.
3. If ITA07 is present with either ITA06 or ITA08, then ITA07 takes precedence.
4. ITA13 is used to clarify the allowance, charge or service.
5. ITA15 specifies the individual code list of the agency specified in ITA02.
6. ITA16 describes the relationship of ITA06, ITA07 or ITA09 to an associated segment.

Data Element Summary

	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES		
Mandatory	ITA01	248	Allowance or Charge Indicator Code which indicates an allowance or charge for the service specified.	M	ID	1/1
	Implementation Note: Use one of these codes: A Allowance C Charge N No allowance or charge					
Conditional	ITA02	539	Agency Qualifier Code Code identifying the agency assigning the code values.	C	ID	2/2
Required			TI Telecommunications Industry			
Required	ITA03	560	Special Services Code Code identifying the special service.	C	ID	2/10

		Implementation Note: Use one of these codes: 10012 Installation 10013 Installation and warranty ZZ Mutually Defined			
Mandatory	ITA04	331	Allowance or Charge Method of Handling Code Code indicating method of handling for an allowance or charge.	M ID	2/2
		Implementation Note: Use one of these codes: 04 Credit Customer Account 06 Charge to be paid by Customer ZZ Mutually Defined			
Not Used	ITA05	341	Allowance or Charge Number	O AN	1/16
Not Used	ITA06	359	Allowance or Charge Rate	O R	1/9
Optional	ITA07	360	Allowance or Charge Total Amount Total dollar amount for the allowance or charge.	O N2	1/9
Not Used	ITA08	378	Allowance/ Charge Percent Qualifier	O ID	1/1
Not Used	ITA09	332	Allowance or Charge Percent	C R	1/6
Not Used	ITA10	339	Allowance or Charge Quantity	O R	1/10
Not Used	ITA11	355	Unit or Basis for Measurement Code	C ID	2/2
Not Used	ITA12	380	Quantity	O R	1/15
Conditional	ITA13	352	Description A free-form description to clarify the related data elements and their content.	C AN	1/80
Conditional	ITA14	150	Special Charge or Allowance Code Code identifying type of special charge or allowance.	C ID	3/3
		Implementation Note: Use ZZ to indicate code was Mutually Defined.			
Required		230	Credit		
Required		586	Processing Charge		
Required		AAJ	Adjustments		
Required		ACF	Access Charge - Federal		
Required		ACH	Access Charges		
Required		AMB	Adjustment for Maximum Charges Billing		
Required		AMC	Absolute Minimum Charge		
Required		ANB	Adjustment for Minimum Charges Billing		
Required		BAS	Base Charge		
Required		MGC	Message Charge		
Required		SER	Service Charge		
Required		SUR	Surcharge		
Optional	ITA15	822	Source Subqualifier A reference that indicates the table or text maintained by the Source Qualifier.	O AN	1/15
Optional	ITA16	662	Price Relationship Code	O ID	1/1

Code indicating the relationship of the price or amount to the associated
segment.

Required	Segment: TDS Total Monetary Value Summary
	Level: Summary
	Loop: _____
	Usage: Mandatory
	Max Use: 1
	Purpose: To specify the total invoice discounts and amounts
Comment: TDS02 is required if the dollar value subject to discount is not equal to the dollar value of TDS01.	

Data Element Summary

	REF DES	DATA ELEMENT	NAME	ATTRIBUTES
Mandatory	TDS01	361	Total Invoice Amount Amount of invoice (including charges, less allowances) before terms discount (if discount is applicable).	M N2 1/10
Not Used	TDS02	390	Amount Subject to Terms Discount	C N2 1/10
Not Used	TDS03	391	Discounted Amount Due	O N2 1/10
Not Used	TDS04	362	Terms Discount Amount	O N2 1/10

Optional

Segment: ITA Allowance, Charge or Service

Level: Summary

Loop: ITA Repeat: >1

Usage: Optional

Max Use: 1

Purpose: To specify allowances, charges or services

Syntax: 1. L02031314 — If ITA02 is present, then at least one of ITA03, ITA13 or ITA14 are required.
2. C0809 — If ITA08 is present, then ITA09 is required.
3. C1011 — If ITA10 is present, then ITA11 is required.
4. C1502 — If ITA15 is present, then ITA02 is required.

Semantic: ITA12 is the quantity of free goods.

Comments: 1. If ITA01 = A-Allowance or C-Charge, then at least one of ITA06, ITA07, or ITA08 must be present.
2. ITA02 identifies the source of the code value in ITA03 or ITA14.
3. If ITA07 is present with either ITA06 or ITA08, then ITA07 takes precedence.
4. ITA13 is used to clarify the allowance, charge or service.
5. ITA15 specifies the individual code list of the agency specified in ITA02.
6. ITA16 describes the relationship of ITA06, ITA07 or ITA09 to an associated segment.

Data Element Summary

	REF DES	DATA ELEMENT	NAME	ATTRIBUTES
Mandatory	ITA01	248	Allowance or Charge Indicator Code which indicates an allowance or charge for the service specified.	M ID 1/1
			Implementation Note: Use one of these codes: A Allowance C Charge N No allowance or charge	
Conditional	ITA02	559	Agency Qualifier Code Code identifying the agency assigning the code values.	C ID 2/2
Required	ITA03	560	Special Services Code Code identifying the special service.	C ID 2/10
			Implementation Note: Use one of these codes: 10012 Installation 10013 Installation and warranty ZZ Mutually Defined	

Mandatory	ITA04	331	Allowance or Charge Method of Handling Code Code indicating method of handling for an allowance or charge.	M	ID	2/2
	Implementation Note: Use one of these codes: 04 Credit Customer Account 06 Charge to be paid by Customer ZZ Mutually Defined					
Not Used	ITA05	341	Allowance or Charge Number	O	AN	1/16
Not Used	ITA06	359	Allowance or Charge Rate	O	R	1/9
Required	ITA07	360	Allowance or Charge Total Amount Total dollar amount for the allowance or charge.	O	N2	1/9
Not Used	ITA08	378	Allowance/ Charge Percent Qualifier	O	ID	1/1
Not Used	ITA09	332	Allowance or Charge Percent	C	R	1/6
Not Used	ITA10	339	Allowance or Charge Quantity	O	R	1/10
Not Used	ITA11	355	Unit or Basis for Measurement Code	C	ID	2/2
Not Used	ITA12	380	Quantity	O	R	1/15
Conditional	ITA13	352	Description A free-form description to clarify the related data elements and their content.	C	AN	1/80
Required	ITA14	150	Special Charge or Allowance Code Code identifying type of special charge or allowance.	C	ID	3/3
	Implementation Note: Use ZZ to indicate code was Mutually Defined.					
Required		230	Credit			
Required		586	Processing Charge			
Required		AAJ	Adjustments			
Required		ACF	Access Charge - Federal			
Required		ACH	Access Charges			
Required		AMB	Adjustment for Maximum Charges Billing			
Required		AMC	Absolute Minimum Charge			
Required		ANB	Adjustment for Minimum Charges Billing			
Required		BAS	Base Charge			
Required		MGC	Message Charge			
Required		SER	Service Charge			
Required		SUR	Surcharge			
Optional	ITA15	822	Source Subqualifier A reference that indicates the table or text maintained by the Source Qualifier.	O	AN	1/15
Optional	ITA16	662	Price Relationship Code Code indicating the relationship of the price or amount to the associated segment.	O	ID	1/1

Mandatory	Segment: SE Transaction Set Trailer Level: Summary Loop: ____ Usage: Mandatory Max Use: 1 Purpose: To indicate the end of the transaction set and provide the count of the transmitted segments (including the beginning (ST) and ending (SE) segments). Comment: SE is the last segment of each transaction set.
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Data Element Summary

Mandatory	REF DES	DATA ELEMENT	NAME	ATTRIBUTES
Mandatory	SE01	96	Number of Included Segments Total number of segments included in a transaction set including ST and SE segments.	M NO 1/10
Mandatory	SE02	329	Transaction Set Control Number Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set	M AN 4/9

REPORT DOCUMENTATION PAGE

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13. ABSTRACT (Maximum 200 words) The Defense Commercial Communications Office (DECCO) acquires long-haul telecommunications services and equipment for the Department of Defense and other Federal agencies. DECCO also bills these organizations on behalf of telecommunications providers. To facilitate the electronic submission of billing and accounting data, new service providers must be given standard data definitions, data content, and format for their submissions. This report contains a data dictionary that lists this information. The report also recommends that DECCO establish a DoD standard compliant with the American National Standards Institute (ANSI) Accredited Standards Committee (ASC) X12 electronic data interchange standards for business transactions. The Telecommunications Industry Forum (TCIF) has published a convention for using the ANSI ASC X12 transaction set for a "Consolidated Service Invoice Statement" as a standard way of transmitting service invoices and required data for auditing prior to payment. This report contains a draft implementation convention that illustrates how DECCO's system data requirements can be met by the TCIF transaction set. It is recommended that DECCO work with TCIF to finalize the convention and adopt it as the DoD standard. To do so will align DECCO with the telecommunications industry, support DoD's policy of making maximum use of electronic data interchange for paperless processing of all business-related transactions, and preclude excess contractual costs for DoD-unique formats.				
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