$$
020129-7 p
$$

## Attachment B

## 2 Redacted Copies

INTRASTATE SS7 CHARGES BILLED TO ACNAS DLT (305-A04-0003) AND IFN (904-A01-0008) $\because$

|  | A | B | C |
| :---: | :---: | :---: | :---: |
| 1 | BILL MONTH | INTRASTATE <br> USAGE | INTRASTATE <br> PORTS \& LINKS |
| 2 | 1-May |  |  |
| 3 | 1-Jun |  |  |
| 4 | 1-Jul |  |  |
| 5 | 1-Aug |  |  |
| 6 | $1-$ Sep |  |  |
| 7 | Oct-01 |  |  |
| 8 | Nov-01 |  |  |
| 9 | Dec-01 |  |  |
| 10 | Jan-02 |  |  |
| 11 | Feb-02 |  |  |
| 12 | Mar-02 |  |  |
| 13 | Apr-02 |  |  |
| 14 | May-02 |  |  |
| 15 | Jun-02 |  |  |
| 16 | Jul-02 |  |  |

# ITC^ ${ }^{\wedge}$ DeltaCom's $1^{\text {st }}$ Production of Documents 

Item No. 4

## REDACTED

| From: | John.Griffin@bridge.bellsouth.com |
| :--- | :--- |
| Sent: | Friday, August 25, 2000 5:07 PM |
| To: | Harold.L.Alexander@bridge.bellsouth.com; Wanda.Allison@bridge.bellsouth.com; |
|  | Tim.Bennett@bridge.bellsouth.com; Gary.W.Bowens@bridge.bellsouth.com; |
|  | John.G.Cameron@bridge.bellsouth.com; Karen.H.Cowart@bridge.bellsouth.com; |
|  | Richard.L.Dunn@bridge.bellsouth.com; Mary.E.Edwards@bridge.bellsouth.com; |
|  | Leeverta.W.George@bridge.belisouth.com; Gloria.Herrington@bridge.bellsouth.com; |
|  | David.Hohett@bridge.bellsouth.com; Lorraine.Lagrange@bridge.bellsouth.com; |
|  | Brenella.Leeper@bridge.bellsouth.com; J.Mccall@bridge.bellsouth.com; |
|  | Jim.Pritchett@bridge.bellsouth.com; Thomas.Randklev@bellsouth.com; |
|  | Claude.H.Rich@bridge.bellsouth.com; Jerry.R.Sumner@bridge.bellsouth.com; |
|  | Carla.Worland1@bridge.bellsouth.com |
|  | Estimated Unbundled SS7 Usage Revenue for July 2000 |

In the attached spreadsheet we have computed the eatimated revenue that usage
based billing for ssi gexyice would bave generated for July 2000. You can take your pick from For comparison purposes it
 We count potentially billable links but onlyf are currently being billed for the Burrogate Annualize the above figures and you're looking at with usage billing versus.
with surrogate orrirng: cerrainiy somewnere in this company there'g that can pay for Agilent technical support during deployment so that we can begin to generate this significant additional revenue.

Incidentally, all of the figures that were used for these computations were very conservative. We were not able to include any TCAP peg counts asaociated with INP because we couldn't find anyone that could provide the information to us.

Hope this helps free up the I'll be out of the office until 9/6 so if you have any questions, contaceichard, claude, or Carla.

Tom

Total Number of Interconnecting Voice Messages Using SS7 in July 2000
TOTAL CC064 CC066 CC110 CC119 CC141 CC720 TOTAL

Total Voice Messages Using SS7 Service in July $2000=$
Number of ISUP Messages per Voice Message =
Total ISUP Messages in Jully $2000=$
Rate per ISUP Message $=$
Total ISUP Revenue for July Would Have Been =
,
Total 800 Service Messages Using SS7 Service in July $2000=$
Number of TCAP Messages per 800 Svc Message $=$
Total TCAP Messages in July $2000=$
Rate per TCAP Message $=$
Total TCAP Revenue for July Would Have Been =

Total SS7 Revenue for July Would Have Been m

Annualized Total Revenue for Unbundled SS7 Would Be 융

WE do not record a CC064 record for most of the land-to-mobile traffic in Bellsouth. If we were to assume a 1:1 T/O ratio for wireless traffic (CC064 \& CC066), then we could expect an additiona land-to-mobile messages that would use SS7 signaling. This, we could expect an additional

Estimated L-to-M Messages Using SS7 Service in July $2000=$ Number of ISUP Message per Voice Message $=$ Total L-to-M ISUP Messages in July $2000=$ Rate per ISUP Message = Additional July Revenue for L-to-M = Projected Total Revenues for July 2000 Would Have Been $=$

Annualized Total Revenue for Unbundled SS7. Would Be
If we were to assume a 2:1 T/O ratio for wireless traffic (CC064 \& CC066), then we could expect an additional land-to-mobile messages that would use SS7 signaling. Thus, we could expect an additional

Estimated L-to-M Messages Using SS7 Service in July $2000=1$
Number of ISUP Message per Voice Message $=$
Total L-to-M ISUP Messages in July $2000=$ Rate per ISUP Message $=$

## Additional July Revenue for L-to-M =

Projected Total Revenues for July 2000 Would Have Been =
1
Annualized Total Revenue for Unbundled SS7 Would Be 書

Total Number of Interconnecting Voice Messages Using SS7 in July 2000


MIA
FTL

JVL

TOTAL

## Randklev, Thomas

| From: | Joseph.K.Badgett@bridge.bellsouth.com |
| :--- | :--- |
| Sent: | Frizay, September 29, 2000 1:22 PM |
| To: | Thomas.Randklev@bellsouth.com |
| Cc: | Joseph.K.Badgett@bridge.bellsouth.com; Frank.Dyer@bridge.bellsouth.com; |
|  | John.Griffin@bridge.bellsouth.com; Cathy.Kuegel1@bridge.bellsouth.com |
| Subject: | 1999 Demand for SS7 |

Tom,
The assumption has always been that the total CCSN traffic would grow $25 \%$ in 2000. Using the 25t growth factor you can back into the 1999 annual traffic:

2000 ISUP Мевsages/Year
2000 TCAP Messages/Year
2000 TOTAL Messages/Year
1999 ISUP Messages/Year
1999 TCAP Messages/Year
1999 TOTAL Messages/Year

Is this sufficient for what you need?
Joe

Randklev, Thomas

| From: | Catthy.Kuegel1@bridge.bellsouth.com |
| :---: | :---: |
| Sent: | Mónday, October 02, 2000 8:42 AM |
| To: | Thomas.Randklev@bellsouth.com |
| Cc: | Joseph.K.Badgett@bridge.bellsouth.com |
| Subject: | Demand for SS7 |
| Importance: | High |
| Tom, |  |
| The 2000 level demand listed in Joe Hadgett.'s Open Mail message (ISUP and TCAP responding to a question from you orrirfiday is airrerent than cne 2000 demand we have in the study. |  |
| Where did you get your 2000 level demand. The figures we used were taken fr if information Joe had provided for our cost study. |  |
| Our 2000 level demand used in the study is: ISUP $\quad$ TCAP |  |
| I just wanted to point this out in case of questions which might arise from different figures. |  |
| Cathy |  |

## Randklev, Thomas

| From: | Martha.Romano1@bridge.bellsouth.com |
| :--- | :--- |
| Sent: | Manday, October 16, 2000 11:39 AM |
| To: | Ron.Waddell2@bridge.bellsouth.com |
| Cc: | Thomas.Randklev@bellsouth.com |
| Subject: | CSS7 Restructure |
| Importance: | High |

## Ron:

We are planning to restructure SS7 usage to begin charging for ISOP and TCAP messages in a tariff filing in December 2000. This will encompass a change in the local awitching basket to carve-out in revenue which is associated with these messages. I understand that you or at least your organization would handle this split. What do I need to provide you?

Rich is advising $I$ need price cap showings in the $D \& J$ and $I$ ' $m$ not real sure what that is. Any help you can provide is greatly appreciated.

## Martha

Randklev, Thomas


Lee.

Randklev, Thomas

| From: | Lee.Russell@bridge.bellsouth.com |
| :--- | :--- |
| Sent: | Frikay, November 17, 2000 4:31 PM |
| To: | E.Honeycutt@bridge.bellsouth.com; Thomas.Randklev@bellsouth.com; Martha.Romano1 |
|  | @bridge.bellsouth.com; Ron.Waddell2@bridge.bellsouth.com |
| Subject: | SS7 Messages |
| Importance: | High |



S57.XLS

ISUP
and TCAP demand. As you can see, the Interstate revenue impact is considerably less than the expected:

The "991xsmsg" and "99IasMsg" sheets give the details of how I arrived at the totals on the summary sheet.

The messages contained on the CABS BDT (i.e. the source for BCATS) have never been verified and are not held out as being reliable. What I've provided here is the best we can do for 1999 messages.

Also, LIDB is not readily available from the statistical MOU records (which are the source for my study). I did, however, go back and simply pull the billed LIDB queries. LIDB had very little impact on the $\$ 5 \mathrm{M}$ number so I didn't include it in the attached workbook.

Let me know where we go from here.
Lee.

## BellSouth 1999 SS7 ISUP and TCAP Message Conversion - Summary

| Jurisdiction <br> Interstate | State/Region | 1999 Eistimated ISUP Messages | 1999 Estimated TCAP Messages | ISUP <br> Rate | $\begin{array}{r} \text { TCAP } \\ \text { Rate } \end{array}$ | $\begin{array}{r} \text { ISUP } \\ \text { Revenue } \end{array}$ | TCAP <br> Revenue | Total SS7 <br> Usage Revenue |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | BellSouth | 5 |  |  |  |  |  |  |
| Intrastate |  |  |  |  |  |  |  |  |
|  | Florida | 暴 |  |  |  |  | --.----- | $\because$ |

Total
BellSouth Total

BellSouth 1999 SS7 ISUP and TCAP Interstate Message Conversion

| Billed Element | Jurisdiction | Direction |  | Msge | SS7 ISUP <br> Multiplier | SS7 TCAP <br> Multiplier | SST ISUP <br> Demand | SS7 TCAP <br> Demand | SS7 ISUP <br> Rate | SS7 TCAP Rate | SS7 ISUP <br> Revenue | SS7 TCAP <br> Revenue |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 500 service | Interstate | Orig |  |  |  |  |  |  |  |  |  |  |
| 700 common line | Interstate | Orig |  |  |  |  |  |  |  |  |  |  |
| 700 common line operator handled | Interstate | Orig |  |  |  |  |  |  |  |  |  |  |
| 700 operator handied | Interstate | Orig |  |  |  |  |  |  |  |  |  |  |
| 700 service | Interstate | Orig |  |  |  |  |  |  |  |  |  |  |
| 800 common line | Interstate | Orig |  |  |  |  |  |  |  |  |  |  |
| 800 service | Interstate | Orig |  |  |  |  |  |  |  |  | $\because$ |  |
| 800 service | Interstate | Term |  |  |  |  |  |  |  |  |  |  |
| 900 common line | Interstate | Orig |  |  |  |  |  |  |  |  |  |  |
| 900 common line operator handled | Interstate | Orig |  |  |  |  |  |  |  |  |  |  |
| 900 operator handled | Interstate | Orig |  |  |  |  |  |  |  |  |  |  |
| 900 service | Interstate | Orig |  |  |  |  |  |  |  |  |  |  |
| 950 | Interstate | Orig |  |  |  |  |  |  |  |  |  |  |
| 976 | Interstate | Term |  |  |  |  |  |  |  |  |  |  |
| DA operator handled | Interstute | Orig | -- - | - |  |  | . . |  | - - |  |  |  |
| Directory Assistance | Interstate | Orig |  |  |  |  |  |  |  |  |  |  |
| Directory Assistance | Interstate | Term |  |  |  |  |  |  |  |  |  |  |
| IDDD | Interstaste | Orig |  |  |  |  |  |  |  |  |  |  |
| MTS | Interstate | Orig |  |  |  |  |  |  |  |  |  |  |
| MTS | Interstute | Term |  |  |  |  |  |  |  |  |  |  |
| cellular/mobile type A | Interstate | Orig |  |  |  |  |  |  |  |  |  |  |
| cellulatmobile type $A$ | Interstate | Term | - | --- |  | - |  |  |  |  |  |  |
| cellular/mobile type B (not billed LS) | Interstate | Orig |  |  |  |  |  |  |  |  |  |  |
| cellular/mobile type B (not billed LS) | Interstate | Term' |  |  |  |  |  |  |  |  |  |  |
| coln $0+$ dialing | Interstate | Orig |  |  |  |  |  |  |  |  |  |  |
| international operator | Interstate | Orig |  |  |  |  |  |  |  |  |  |  |
| operator handled | Interstate | Orig |  |  |  |  |  |  |  |  |  |  |
| outWATS | Interstate | Orig | -- |  |  |  |  |  |  |  |  |  |
| sent-paid coin (coin 1+ dialing) | Interstate | Orig |  |  |  |  |  |  |  |  |  |  |
| switched 56 KBits | Interstate | Orig |  |  |  |  |  | i |  |  |  |  |

BellSouth 1999 SS7 ISUP and TCAP Intrastate Message Conversion

## State Billed Element

 Jurisdiction Direction SS7 ISUP MulttplierSS7 TCAP Mrittplier SS7 ISUP SSTTCAP SS7 ISUP SS7 TCAP Rate

857 TCAP
 Mg: Muldille Mat.enes. Demand Demand Rate Revenge

| FL | 500 access customer ID charge | Intrastate | Orig |
| :---: | :---: | :---: | :---: |
| FL | 500 service | Intrastato | Orig |
| FL | 700 common line | Intrastate | Orig |
| FL | 700 common line operator handled | Intrastate | Orig |
| FL | 700 operitor handled | Intrastate | Orig |
| FL | 700 servico | Intrastate | Orig |
| FL | 800 common line | Intrastate | Orit |
| FL | 800 service | Intrastate | Orig |
| FL | 800 service | Intrastate | Term |
| FL | 900 common line | Intrastate | Orig |
| FL | 900 common line operator handled | Intrastato | Orig |
| FL | 900 operator handled | Intrestare | Orig |
| FL | 90.5 stave | Increstate | Ong |
| $F$ | 4 - | Lusstute | - |
|  | , |  | ' |

BellSouth 1999 SS7 ISUP and TCAP Intrastate Messago Conversion

| State | BMed Eleruent | Jurtadiction | Direction | Mre | SS7 ISUP Multiplier | SS7 TCAP Multipller | SS7 ISUP <br> Demand | SST TCAP Demand | SS7 ISUP <br> Rate | SS7 TCAP | SST ISUP Revenae | ss TCAP Revenue |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FL | MTS | Intrutate | Tarm |  |  |  |  |  |  |  |  |  |
| FL | cellular/mobile type A | Intrastace | Orig |  |  |  |  |  |  |  |  |  |
| FL | cellulartmoblle type A | Intrestats | Temm |  |  |  |  |  |  |  |  |  |
| FL | cellular/mobile type B (not billed LS) | Incisitate | Orig |  |  |  |  |  |  |  |  |  |
| FL | cellular/mobille type B (not billed LS) | Intrastate | Temm |  |  |  |  |  |  |  |  |  |
| FL | coin 0+ dialing | Intrustate | Orig |  |  |  |  |  |  |  |  |  |
| FL | operator handled | Intrastate | Orig |  |  |  |  |  |  |  |  |  |
| FL | operator pass thrwOPH 0-\%op transfer | Intrastato | Orig | - |  |  | -- -- |  |  |  | , ؛ |  |
| FL | OUTWATS | Intrastato | Orig |  |  |  |  |  |  |  | , |  |
| FL | sent-paid coln (coin 1+ dialing) | Intrastate | Oris |  |  |  |  |  |  |  |  |  |
| FL | switchod. 56 KBits | Intrastate | Oris |  |  |  |  |  |  |  |  |  |

Randklev, Thomas
From: Lee.Russell@bridge.bellsouth.com
Sent: $\quad$ Wednesday, November 22, 2000 9:11 AM
To:
Thomas.Randklev@bellsouth.com
Cc:

Subject:
Don.Barbour@bellsouth.com; Hattie.H.Coleman@bridge.bellsouth.com; E.Honeycutt@bridge.bellsouth.com; Martha.Romano1@bridge.bellsouth.com; Lee.Russell@bridge.bellsouth.com; Ron.Waddell2@bridge.bellsouth.com RE: SS7 Messages

Tom,
If everyone is comfortable with the demand I developed, Dec 18th should be no problem to file. We need, however, to coordinate this filing with the other filings taking place in December. You need to contact Don Barbour and Hattie Coleman with your plans and make sure that the filing team (which is led by Don) is on board with everything that is potentially going on in December.

My part will be comparatively easy, Don and Hattie will know if there are other lasues that will hinder your ability to file.

Also remember, the number is interstate AND intrastate. The interstate number was only Is this or considering that $I$ understood the interstate estimate was

Lee.
=->Hello Lee,
=->
=->I am just following up to your e-mail from last week which
$=->e s t a b i l a h e d 1999$ Demand for SS7 messages at This should
$=->b e$ good for Ed as it will require him to lower his rates less than
$=->$ the anticipated I also interpret this number as working well
=->within our established structure. Given this info, and the
m->justification that $I$ am writing for the multipliers, will you still
$=->$ be able to get Martha the info by Dec 18 for the ensuing filing?
$=->$
=->Thanks in advance,
=->TOM
$=->404-927-7024$
=->

Randklev, Thomas

| From: | Martha.Romano1@bridge.bellsouth.com |
| :--- | :--- |
| Sent: | Wednesday, November 22, 2000 9:14 AM |
| To: | Lee.Russell@bridge.bellsouth.com |
| Cc: | Don.Barbour@bellsouth.com; Hattie.H.Coleman@bridge.bellsouth.com; |
|  | E.Honeycutt@bridge.bellsouth.com; Thomas.Randklev@bellsouth.com; Martha.Romano1 |
|  | @bridge.bellsouth.com; Ron.Waddell2@bridge.bellsouth.com |
| Subject: | RE: SS7 Messages |

Lee:
As we discussed on our conference call, I will be preparing filings for the states to be made the first week of January. To do so, I will need not only the price out to adjust the interstate local switching but price outs for each state for the new local awitching rate. I need Alabama's immediately as there is a 6 week interval between delivery to the PSC and effective date. The remaining state, need to be available to me by December 13 th .

Will you be involved in the price outs, if not can you advise who has that responsibility now?

```
Thanks for your assistance,
Martha
please advise if you wil
=->Tom,
=->
m->If everyone is comfortable with the demand I developed, Dec 18th should be
=->no problem to file. We need, however, to coordinate this filing with the
=->other filings taking place in December. You need to contact Don Barbour and
m->Hattie Coleman with your plans and make gure that the filing team (which is
=->led by Don) is on board with everything that is potentially going on in
=->December.
=->
=->My part will be comparatively easy. Don and Hattie will know if there are
=->other issues that will hinder your ability to file.
=->
=->Also remember, the. number is interstate AND intrastate. The
=->interstate number was on\y,_-Is this OK considering that I understood
=->the interstate estimate was
=->
=->Lee.
=->
=->=->Hello Lee,
=->=->
=->n->I am just following up to your e-mail from last week which
=->=->established 1999 Demand for 3S7 messages at { This should
m->=->be good for Ed as it will require him to lower frife rates less than
=->=->the anticipated; I also interpret this number as working well
=->=->within our estaburghed structure. Given this info, and the
=->=->justification that I am writing for the multipliers, will you still
=->=->be able to get Martha the info by Dec 18 for the ensuing filing?
=->=->
E->=->Thanks in advance,
=->=->TOM
=->=->404-927-7024
=->=->
=->
```

| From: | John.Griffin@bridge.bellsouth.com |
| :--- | :--- |
| Sent: | Tuesday, December 19, 200r 26 PM |
| To: | Thomas.Randklev@bellsouth, com |
| Subject: | Unbundled SS7 Volumes and Revenues |

Here is the spreadsheet with ISUP and TCAP volumes rated out.
Tom

| State | Demand Period | ISUP <br> Messages | TCAP Messages | ISUP Rate | TCAr Rate | ISUP <br> Revenue | Estimated Annual |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | TCAP | Total |
|  |  |  |  |  |  |  | Revenue | Revenue |
| - | . |  | -- .-- |  |  |  | -..- |  |

Total

## Randklev, Thomas

| From: | Robert.E.James@bridge.bellsouth.com |
| :--- | :--- |
| Sent: | Thursday, Aprid 05; 2001 9:47 AM |
| To: | Ron.Waddell2@bridge.bellsouth.com |
| Cc: | Steve.Bigelow2@bridge.bellsouth.com; Bradley.Gray@bridge.bellsouth.com; |
|  | R.J.Ham@bridge.belisouth.com; Sharon.J.Hutchens@bridge.bellsouth.com; |
|  | Robert.E.James@bridge.bellsouth.com; Thomas.Randkiev@bellsouth.com; Martha.Romano1 |
|  | @bridge.belisouth.com; Richard.Sbaratta@bellsouth.com; |
|  | Tom.Walden@bridge.bellsouth.com |
|  | SS7 Fubject: |



3. There is a average or unree isup messages per call.
4. All CMRSs use other carriers to poll data bases (TCAP).
5. Messages are 2000 actual for CMRS providers from RAO extracts.
6. Jurisdiction of signaling message revenue follows the voice message.

Randklev, Thomas

| From: | Robert.E.James@bridge.bellsouth.com |
| :--- | :--- |
| Sent: | Thursday, April 05, 2001 5:50 PM |
| To: | Tom.Walden@bridge.bellsouth.com |
| Cc: | Steve.Bigelow2@bridge.bellsouth.com; Bradley.Gray@bridge.bellsouth.com; |
|  | Sharon.J.Hutchens@bridge.bellsouth.com; Robert.E.James@bridge.bellsouth.com; |
|  | Thomas.Randklev@bellsouth.com; Martha.Romano1@bridge.bellsouth.com; Ron.Waddell2 |
|  | @bridge.bellsouth.com |
|  | Subject: |

SSTSIG.XIS
Attached is an file that has ISUP allocated to the specific demand pertods.


## Assumptions

1. Fifty percent of all wireless messages use SS7 trunks.
2. Under the interconnection contract CMRS providers will only pay for isup messages associated with call terminating to BST.
3. There is a average of three isup messages per call.
4. All CMRSs use other carriers to poll data bases (TCAP).
5. Messages are 2000 actual for CMRS providers from RAO extracts.
6. Jurisdiction of signaling message revenue follows the voice message.

| STATE | DATE | ISUP MESSAGES |
| :--- | :--- | :--- |
|  |  |  |
| FL | Dec-00\| | 1 |

From:
Sent:
To:
Cc:
Subjact:

Stẹphen.Armstrong@bridge.bellsouth.com
Thursday, April 12, 2001 12:09 PM
E.Honeycutt@bridge.bellsouth.com; Ed.Matejick@bridge.bellsouth.com; Thiomas.Randklev@bellsouth.com
Martha.Romano1@bridge.bellsouth.com; Ron.Waddell2@bridge.bellsouth.com SS7 D\&J

The following comments were added to the D\&oJ for the SS7 filing. Currently, I am trying to make the necessary changes to the D\&J but I need an explanation to how the "determined number of ISUP and TCAP query messages per voice message" was developed. I am not sure who developed these factors but if anyone knows how these were determined please send me an explanation to insert into the D\&J.

### 4.0 TARIPF REVIEW PLAN

Total $3 S 7$ demand was determined through the completion of two steps. First determine the number of query messages, total 1999 Interstate voice message call type w-a-sere pulled from CABS statistical billing records. After obtaining the 1999 voice message demand, the quantity of query messages was obtained by multiplying total voice message demand by the determinedNEED To EXPLAIN HOW DETERMINED number of ISUP and TCAP query messages per voice messageHOW WERE CALL TYPBS....
------------------------
Thanks,
stephen

| From: | Stephen.Armstrong@bridge.bellsouth.com |
| :--- | :--- |
| Sent: | Thtrsday, April 12,2001 $2: 39$ PM |
| To: | Thomas.Randklev@bellsouth.com |
| Cc: | E.Honeycutt@bridge.bellsouth.com; Ed.Matejick@bridge.bellsouth.com; Ron w. |
|  | @bridge.bellsouth.com |
| Subject: | SS7 Factors |

Tom,
Actually, what I am looking for is an explanation as how it was determined rid there are $4 / 3$ (depending on call type) ISOP and 2 TCAP messages per voice message. These factors were used by Lee Russell in the original ISUP and tcaf demand calculations. I believe what is included in the spreadsheet you sent me, is an explanation as to how and why third-party messages were calculated If I am missing something, please let me know. Thanks,

Stephen

Randkiev, Thomas

| From: | Carla.Worland1@bridge.bellsouth.com |
| :---: | :---: |
| Sent: | Thúrsday, April 12, 2001 5:55 PM |
| To: | Thomas.Randklev@bellsouth.com |
| Cc: | Stephen.Armstrong@bridge.bellsouth.com; Richard.L.Dunn@bridge.bellsouth.com; John.Griffin@bridge.bellsouth.com; Claude.H.Rich@bridge.bellsouth.com; Carla.Worland1 @bridge.bellsouth.com |
| Subject: | RE: SS7 Factors |
| Tom, |  |
| According to GR-394, Appendix C page 5, "SS7 for Call Setup and Releae to IXC: |  |
| Tandem" (a general call where the calling party disconnects first), there are 7 |  |
| ISUP messages (IAM, COT, ACM, ANM, EXT, REI, AND RLC) . A TCAP (database |  |
| transaction) would consist of a Query and Response message. There are |  |
| approximately 7 ISUP and 2 TCAP related messages with a normal call. |  |
| BBI tean |  |

Randklev, Thomas


From:
Sent:
To:
Cc:

Subject:
Importance:

Jcfields@bridge.bellsouth.com Tuésday, July 17, 2001 2:48 PM Bradley.Gray@bridge.bellsouth.com
Ed.Matejick@bridge.bellsouth.com; Thomas.Randklev@bellsouth.com; Martha.Romano1 @bridge.bellsouth.com; Ron.Waddell2@bridge.bellsouth.com Intrastate SS7 Priceout Request

High

This memo is to request intrastate priceouts, in all states except Kentucky, to mirror the interstate ss7 Usage filing.

The intrastate priceouts should assume current rates and regulations and the priceout should be made revenue neutral by reducing local switching.

If there are questions on demand quantification, please contact Tom Randklev at (404) 927-7024.

These priceouts are needed in an expedited manner.

## Randklev, Thomas

From:
Sent:
To:
Cc:
Subject:

Bradey.Gray@bridge.bellsouth.com
Wednesday, July 18, 2001 10:55 AM
Thamas.Randklev@bellsouth.com
Jcfields@bridge.bellsouth.com; Ron.Waddell2@bridge.bellsouth.com Intrastate SS7 Priceout Request

## 2

Intrastate SS7
Priceout Reques.
Tom,
If the demand has changed since the original priceouts were done, I will need update quantities to recreate these priceouts. Please give me either the okay to go with what was used earlier or the new demand figures.

Thanks,
Brad

| From: | Fiejds, Jennette |
| :--- | :--- |
| Sent: | Wédnesday, September 26, 2001 4:11 PM |
| To: | Martin, Glyn; Walden, Tom, |
| Cc: | Bigelow, Steve; Gray, Bradley, Waddell, Ron; James, Robert; Matejick, Ed; Romano, Martha; |
|  | Randklev, Thomas |
| Subject: | RE: SS7 Priceouts |
|  | High |

Per the memo you received from the CCS7 product Manager, Tom Randklev, regarding the refiling of the State Tariffs for SS7 Usage-based billing (Demand), previously provided, should be used. The local switching demand should be lowered by the demand for the new SS7 rate elements, ISUP and TCAP messages in each of the states (except KY).

I think, new or revised A35 demand should come from Bob James.
When can we expect to receive the priceouts in the states where you do not need reviged demand. Please advise.
please call if additional information is needed from me.

```
-----Original Message-----
From: Glyn.s.Martin@bridge.bellsouth.com
[mailto:Glyn.S.Martin@bridge.bellsouth.com]
Sent: Wednesday, September 26, 2001 3:40 PM
To: Jennette.Fields@BellSouth.com
Cc: steve.Bigelow2@bridge.bellsouth.com;
Bradley.Gray@bridge.bellsouth.com; Ron.Waddell2@bridge.bellsouth.com
Subject: SS7 Priceouts
```

See attached from Tom.
g.

Randklev, Thomas

| From: | Robert.E.James@bridge.bellsouth.com |
| :--- | :--- |
| Sent: | Wednesday, September 26, 2001 4:21 PM |
| To: | Jennette.Fleids@BellSouth.com |
| Cc: | Steve.Bigelow2@bridge.bellsouth.com; Bradiey.Gray@bridge.bellsouth.com; |
|  | Robert.E.James@bridge.bellsouth.com; Glyn.S.Martin@bridge.bellsouth.com; |
|  | Ed.Matejick@BellSouth.com; Thomas.Randklev@BellSouth.com; |
|  | Martha.Romano@BellSouth.com; Ron.Waddell@bridge.bellsouth.com; |
|  | Tom.Walden@BellSouth.com |
| Subject: | RE:SS7 Priceouts |

I am not the person that should be providing demand on the ss7. We don't track it and we don't forecast it. I helped put it together last time because it had to be filed so quickly and no one had any data. I extrapolated what I gave from mous and an assumption set to meet the filing date.

```
m->Per the memo you received from the CCS7 Product Manager, Tom Randklev,
=->regarding the re-filing of the State Tariffs for S87 Uaage-based billing
=-> (Demand), previously provided, should be used. The Local Switching demand
=->should be lowered by the demand for the new SS7 rate elements, ISOP and TCAP
=->messages in each of the states (except KY).
=->
=->I think, new or revised A35 demand should come from Bob James.
=->
=-> Fhen can we expect to receive the priceouts in the states where you do not
=->need revised demand. Please advise.
=->
=->Please call if additional information is needed from me.
=->
=->
=->-----Original Message-----
=->From: Glyn.S.Martinebridge.bellsouth.com
=-> [mailto:Glyn.S.Martin@bridge.bellsouth.com]
=->Sent: Wednesday, September 26, 2001 3:40 PM
=->TO: Jennette.FieldseBellsouth.com
=->Cc: Steve.Bigelow2@bridge.bellsouth.com;
=->Bradley.Gray@bridge.bellsouth.com; Ron.Waddell2@bridge.bellsouth.com
a->Subject: SS7 Priceouta
=->
=->
=->See attached from Tom.
=->
=->g.
#->
```

Randklev, Thomas


Please review the attached. The messages were derived via the same methodology as they were for the IXs filing. I do have a question though. Should I grow the messages by the same factor for 3rd Party Providera? Do the IXS factors hold for IAS?

Thanks,

## Brad

BCATS-MOU Results
June 2001-

## Jur

Intrastate
Inirastate
Intrastate
Intrastate
Intristate
Jntrastate
Intrastate
Intrastate
Intrastate
Intrastate
Intrastate
Introstate
Intrestate
Intrustate
Intrastate
Intrastate
Intrastate
Intuastate
Intrestate
Intrastate
Intrastate
Intrustate
Intrastate
Intrestate
Intrastate
Intrastate

| State | Deacription |
| :---: | :---: |
| FL | 500 access customer ID charge |
| FL | 500 service |
| FL | 700 common line |
| FL | 700 common line operator handled |
| FL | 700 opertuor handled |
| FL | 700 service |
| FL | 800 commoa lite |
| FL, | 800 service |
| FL | 800 service |
| FL | 900 common line |
| FL | 900 opervtor fiandiled |
| FL | 900 service |
| FL | 950 |
| FL | Directory Assistance |
| FL | MTS |
| FL | MTS |
| FL | celluiar/mobile type A |
| FL | celtular/mobile type A |
| FL | cellular/mobile type B (not billed LS) |
| FL | cellular/mobile type B (not billed LS) |
| FL | coin $0+$ dialing |
| FL | operator handled |
| FL | operator pass thrw/OPH 0-\%op transfer |
| FL | outwats |
| FL | sent-paid coin (eoin 1+ dialing) |
| FL | switched 56 KBits |

Direction
Statiatical SS7 ISUP SS7 TCAP SS7 ISUP
SST TCAP
Originating
Ongmatang
Originuting
Originating
Originating
Originating
Originating
Originating
Terminating
Originating
Originating
Originating
Originating
Terminuting
Originating
Terminating
Originating
Termonating
Originating
Terminating
Originating
Originating
Originating
Originating
Originating
Originating
Messagen Multiplier Multaplier Demand .....Demand

Randklev, Thomas

| From: | Hendrix, Jerry D |
| :--- | :--- |
| Sent: | Tuesday, October 02, 2001 8:04 AM |
| To: | Randklev, Thomas |
| Subject: | RE: IAS SS7 |

Thanks Tom, my suggest is that we move forward. Thanks
-----Original Message-----
From: Randklev, Thomas
Sent: Monday, October 01, 2001 4:18 PM
To: Hendrix, Jerry D
Subject: FW: IAS SS7

Hello Jerry,
I just wanted to remind you about this document from the Price out folks regarding our re-filing as revenue neutral. I left you a copy on Friday to review before I sent word back to Brad. If you have given this a look and it looks alright, then I will e-mail Brad recommending that we move forward. If it does not meet with your approval, I will simply need some "next steps" to follow up.

Thanks in advance for your time and assistance, TOM
404-927-7024
-----Original Message-----
From: Bradley.Grayebridge.bellsouth.com
[mailto: Bradley.Gray@bridge.bellsouth.com]
Sent: Friday, September 28, 2001 10:11 AM
To: Thomas.Randklevebellsouth,com
Cc: Stephen.Armstrong@bridge.bellsouth.com
Subject: IAS SS7

Tom,
please review the attached. The messages were derived via the same methodology as they were for the IXs filing. I do have a question though. Should I grow the messages by the same factor for 3rd Party Providers? Do the IXS factors hold for tas?

Thanks,
Brad

## Randklev, Thomas

From:
Sent:
To:
Cc:

Subject:

Bradley.Gray@bridge.bellsouth.com
Tuésday, October 02, 2001 9:45 AM
Thomas.Randklev@bellsouth.com
Steve.Bigelow2@bridge.bellsouth.com; Jennette.Fields@bellsouth.com;
Bradley.Gray@bridge.bellsouth.com; Martha.Romano@bellsouth.com; Ron.Waddell2
@bridge.bellsouth.com; Tom.Walden@bellsouth.com
FW: IAS SS7

Tom,
Thanks for the approval. Just to recap: I will use the TCAP and ISUP messages calculated using the IXS methodology. I will also gross them up by the 3rd Party Provider factors. I will add the new wireless numbers to be provided by Bob James. This will be the total demand for the new E6 TCAP and ISUP elements. For the non-usage items, I will use the demand that is being converted from A35 to E6.

I haven't received the new numbers from Bob yet, so $I$ can't give you a timeframe yet. However, once I get that demand, I should be able to turn the priceouts around within a day.

Brad

## Randklev, Thomas

From:
Sent:
To:
Subject:

Robert.E.James@bridge.bellsouth.com
Wednesday, October 03, 2001 12:58 PM
Thomas.Randklev@bellsouth.com
SS7 Numbers
ss7sig.ans
Take a look at these numbers. I used different source data and three test periods changed.

SS7 ISUP DEMAND by TEST PERIOD

| Test Period | STATE |  |
| :---: | :---: | :---: |
| Jun-01 | FL |  |

## Assumptions

1. Fifty percent of all wireless messages use $S S 7$ trunks for 2000 test periods and $70 \%$ for 2001.
2. Under the interconnection contract CMRS providers will only pay for isup messages associated with call terminating to BST.
3. There is a average of three isup messages per call.
4. All CMRSs use other carriers to poll data bases (TCAP).

5 Data extrapolated from MARS system.
6. Jurisdiction of signaling message revenue follows the voice message.

ISUP
tcap
14 day actual

ISUP

TCAP
averaged by day

Junuay 2003 Through Decerpher 2000


| 0601410000 | FLL | + + X |  |
| :---: | :---: | :---: | :---: |
| 0601410000 | FL | TPP+X | COS7 Sipuming Com S6utpt Fec |
| 0601410000 | FL | TPP+X |  |
| 0601410000 | PL | TMP+X | CCS7 Sipuras Com /56tupy Fex |
| 0601410000 | FL | TTP+X |  |




0601450000 RL THP+X CLI
0601430000 FL TPF+X CCST Siqueling Cova /S6ktys Fac - NR

0601420000 FL PT\&SX CCST Simpling Termination .SIP
0601420000
0601420000
0601420000
0501420000


FL. PTESX CCS7 Siqaing Tanderion STIP Port F. FTESX CCS7 Sientre Tecmination STP Port IL PISSX CCST Sigueng Termindion STP Port

## ESTABLISHING BASE YEAR 1999 DEMAND:

| Erom Joe Badgett 9-29-00 |
| :--- |
| 2000 ISUP |
| 2000 TCAP |
| Total Messages |
| 1999 ISUP |
| 1999 TCAP |
| Total Messages |

## Growth Factor Despite the variety of growth assumptions <br> 1.25 <br> (10\% for customer links and 28\% for A-Links) <br> $25 \%$ growth from 1999 to 2000 is the Network AVE. <br> *Note also, that there was more growth from 1998

2000 TCAP

1999 ISUP
Total Messages
*All numbers listed above were used in the September 2000 SS7 Cost Study and were supplied by Joe Badgett. The Cost Study was completed by Cathy Keugel and Lorean King.

| Info from FCC Filing In QTR 4, 2000; |  |
| :---: | :---: |
| TCAP - Tariff Rate | \$0.000123 |

Local Switched Access to be Offiset:
to 1999 which is largely attributed to LNP.
JOE BADGETTS TRAFFIC ASSUMPTIONS:
1999 AVERAGE 1-WAY PEAK OCTETS/SECOND/CUSTOMER LINK
1999 TOTAL 1-WAY OCTETS/SECOND FOR ALL CUSTOMER LINKS 1999 TOTAL 2-WAY OCTETS/SECOND FOR ALL CUSTOMER LINKS
1999 2-WAY OCTETS/HOUR FOR ALL CUSTOMER LINKS
1999 2-WAY OCTETS/DAY FOR ALL CUSTOMER LINKS
1999 2-WAY OCTETS/YEAR 1999 FOR ALL CUSTOMER LINKS
OCTETS PER MESSAGE
1999 ANNUAL MESSAGES
\% MESSAGES ISUP
\% MESSAGES TCAP
1999 ANNUAL ISUP MESSAGES
1999 ANNUAL TCAP MESSAGES


| Jurisdiction | State/Region | 1999 Estimated ISUP Messages | 1999 Estimated TCAP Messages | $\underset{\substack{\text { ISUP } \\ \text { Rate }}}{ }$ | $\begin{array}{r} \text { TCAP } \\ \text { Rate } \end{array}$ | ISUP <br> Revenue | TCAP <br> Revenue | Total SS7 <br> Usage Revenue |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Interstate |  |  |  |  |  |  |  |  |
|  | BellSouth |  |  |  |  |  |  |  |

Total
BellSouth Total


# BellSouth 1999 SS7 ISUP and TCAP Intrastate Message Conversion 

State Bmed Element

SS7 ISUP
Demand

## SS7 TCAP

 Demand
## SS7 ISUP

Rato


TCAP SS7 ISUP Revenue SS7 TCAP Revenue

| FL | 500 eccess customer ID charge | Intrustate | Orig |
| :---: | :---: | :---: | :---: |
| FL | 500 service | Intrastate | Orig |
| FL | 700 common line | Intrastate | Orig |
| FL | 700 common line operator handled | Intrastate | Orig |
| FL | 700 operator handled | Intrastate | Orig |
| FL | 700 service | Intrustate | Orig |
| FL | 800 common line | Intrastate | Orig |
| FL | . 800 eervice | Intrustate | Oris |
| FL | 800 erervice | Intrustate | Term |
| FL | 900 common line | Intrustate | Oris |
| FL | 900 common line operator handled | Introstate | Oris |
| FL | 900 operator handled | Intrastate | Orig |
| FL | 900 service | Intrastate | Orig |
| FL | 950 | Intrastate | Orig |
| FL. | 976 | Intrustate | Term |
| FL | Directory Assistance | Intrustate | Temu |
| FL | MTS | Intrastate | Orig |

BellSouth 1999 SS7 ISUP and TCAP Intrastate Mesage Conversion

| State | Billed Element | Juridalction | Direction | Mea | SS7 ISUP Mnitiplier | sst TCAP Mnitholier | ss7 ISUP Demend | $\underset{\text { DS7 TCAP }}{\text { Dend }}$ | $\underset{\substack{\text { SS7 ISUP } \\ \text { Rate }}}{\text { In }}$ | $\begin{array}{r} \text { SS7 TCAP } \\ \text { Rate } \end{array}$ | Ss7 ISUP Revenue | SS7 TCAP |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FL | MTS | Intrutale | Term |  |  |  |  |  |  |  |  |  |
| FL | celhularfmobile type A | Intrsatato | Orig |  |  |  |  |  |  |  |  |  |
| FL | collularimobile type A | Intretase | Term |  |  |  |  |  |  |  |  |  |
| FL | celhular/mobile type B (not billed LS) | Intrustate | Orig |  |  |  |  |  |  |  |  |  |
| FL | cellularfmoblie type B (not billed LS ) | Intrustero | Tam |  |  |  |  |  |  |  |  |  |
| FL | coin $0+$ dialing | Intrutate | Orig |  |  |  |  |  |  |  |  |  |
| FL | operater handled | Intrustate | Orig |  |  |  |  |  |  |  |  |  |
| FL | operator pass thrwOPH 0-1op transfer | fitrastate | Orig |  |  |  |  |  |  |  | $\stackrel{4}{4}$ |  |
| FL | outWATS | Intustate | Orig |  |  |  |  |  |  |  |  |  |
| PL | senr-pald coto ( $\operatorname{coin} 1+$ dinling) | firustate | Otis |  |  |  |  |  |  |  |  |  |
| FL | switubed 56 KBH | Intrastate | Orig |  |  |  |  |  |  |  |  |  |

Originally detalled by Lee Rusself-Nov 17, 2000:
Determining SS7 Signalling Message Demand by ISUP and TCAP for Base Year 1999

| Jurisdiction | State/Region | 1999 Estimated <br> ISUP Messages | 1999 Estimated TCAP Messages | $\begin{aligned} & \text { ISUP } \\ & \text { Rate } \end{aligned}$ | TCAP <br> Rate | $\begin{array}{r} \text { ISUP } \\ \text { Revenue } \end{array}$ | $\begin{array}{r} \text { TCAP } \\ \text { Revenue } \end{array}$ | Total SS7 Usage.Revenue |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Interstate |  |  |  |  |  |  |  |  |
|  | BellSouth |  |  |  |  |  |  |  |
| Intrastate |  |  |  |  |  |  |  |  |

BellSouth Total



## Twoul

BellSenth Towt Mexmger (19\%)
—NUT




| Total |
| :---: |
| Asercegate Totus |
| ***Acmais Ve Rectimar |


| Reverue |
| :---: |
| Neutral Total [for Local |
| Swhiching reduction] |

Randklev, Thomas

| From: | Robert.E.James@bridge.bellsouth.com |
| :---: | :---: |
| Sent: | Thursday, October 04, 2001 2:40 PM |
| To: | Bradley.Gray@bridge.bellsouth.com |
| Cc: | Steve.Bigelow2@bridge.bellsouth.com; Jennette.Fields@BellSouth.com; R.J.Ham@bridge.bellsouth.com; Thomas.Randklev@BellSouth.com; Martha.Romano@BellSouth.com; Ron.Waddell2@bridge.bellsouth.com; Tom. Walden@BellSouth com |
| Subject: | FW: IAS SS7 |

S57sic.X.
Attached is the information for ss7.


## Assumptlons

1. Fifty percent of all wireless messages use SS7 trunks for 2000 test periods and $70 \%$ for 2001.
2. Under the interconnection contract CMRS providers will only pay for isup messages associated with call terminating to BST.
3. There is a average of three isup messages per call.
4. All CMRSs use other carriers to poll data bases (TCAP).

5 Data extrapolated from MARS system.
6. Jurisdiction of signaling message revenue follows the volce message.

## Randkiev, Thomas

From:
Sent:
To:
Cc:
Subject:

Stephen.Armstrong@bridge.bellsouth.com
Wednesday, Apri 25, 2001 9:11 AM
Hattie.H.Coleman@bridge.bellsouth.com
Thomas.Randklev@bellsouth.com; Martha.Romano1@bridge.bellsouth.com; Ron.Waddell2 @bridge.bellsouth.com
S57 Fling Package


BSTR4251.FM3
Hattie,

Attached is the TRP and pdf workpapers needed for the filing package. Also, here is a couple of changes to tbo Dos that need to be made. If you have any trouble understanding these, let me know and we can talk through them. Red is current version, blue is new version.

D\&J Changea
section 2.1 last sentence
In addition, as shown in Workpaper TGT-1, this filing reduces the revenue generated from the ATS rate by [RON TO SOPPLY]. The current ATS rate is [RON TO SUPPLY] and the proposed ATS rate as a result of this filing will be [RON TO SUPPLY] as shown in Workpaper TGT-1.
In addition, as shown in Workpaper TGT-1, this filing increases the revenue generated from the ATS rate elements by This increase has no impact on the current ATS rate of

Section 4.0 middle of page:
The volume of measages for the observation period was then annualized. This annualized volume was then reduced by 5\%, representing demand growth over the 1999/2000 time frame.
The volume of messages for the observation period was then annualized. This annualized volume was then reduced by a rate of 54 annually, representing demand growth over the 1999/2000 time frame.

Last Sentence
Appendix A Horkpaper Ts-1 shows the this ISUP demand of [RON TO SUPPLY] messages and TCAP demand of [RON TO SUPPLY] messages. This demand generatea revenue of [RON TO SUPPLY] as shown in Appendix B Workpaper SUM-A. BellSouth proposes to offset this additional revenue by reducing Local Switching rates by [RON TO SUPPLY] as shown in Appendix B Workpaper TS-1.
Appendix A Horkpaper TS-1 shows the ISUP demand of Fmessages and TCAP demand of $\frac{1}{6}$ measages. This demand generates revenue of as shown in Appendix A Workpaper SUM-A. BellSouth proposes to offset this additional revenue by reducing Local Switching rates byid as shown in Appendix A Workpaper TS-1.

Let me know if you have any questions,
Thanks,
Stephen
977-0474

| descruption | SOURCE |
| :---: | :---: |
| CMT BASKET |  |
| 1. TOTAL BASKET | Wotpapercher |
| A. END USER COMMMONLINE | Watyper $\mathrm{CL}_{2}$ |
| B. MOU SENSTITE | Wortpererche |
| C. PICC | Wortapercl-2 |
| D.USAC RECREPTS | Worpeper $\mathrm{Cl}_{2}$ |
| TRAFFIC SENSITTM BASKET |  |
| 2 actual prictindex (afi) | Wortaper TS-1 |
| 3. SERVICE BAND INDEX (SBI) |  |
| A. LOCAL Switciling | Warpaper TS-1 |
| b. information | Wodpaper TS-1 |
| C. Database |  |
| 2. EOODATARASE VERTICAL SVCS | Wordpaper TS-1 |
| D. BILINONAMB AND ADDRESS | Wostperer TS-1 |
| E LOCAL SWITCHING TRUNK PORTS | Workeper TS-1 |
| F. STP PORT TERMINATION | Woripueer TSM 1 |


| USF Adjurtmeat - Rension 1 Part 2 (USAC RectipuCCL Clmage) |  |
| :---: | :---: |
| description | source |
| TRUNKING BASKEET |  |
| 1. PRICE CAP INDEX (PCD) | Wodtpuper PC-1 |
| 2 ACTUAL PRICE INDEX (API) | Wortperer TR-I |
| 3. SERVICE BANDINDEX (SBD) |  |
| A IINTERCONNECTION CHARGE | Wordeper TR-1 |
| b. TANDEM SWTTCHED TRANSPORT |  |
| - DENSTTY ZONE 1 | Wortpper TR-1 |
| b. DENSITY ZONE 2 | Wottipere TR-1 |
| c. DENSITY ZONE 3 | Watippeer TR-1 |
| a NON ZONE | Waty |
| e. TOTAL TANDEM SWITCHED TPT | Workpeer TR-1 |
| c. votce crade, wats, |  |
| D. Digital data, |  |
| (1) DSI |  |
|  |  |
| 2. DENSTIY ZONE 1 | Watpeper TR-1 |
| b. DENSTTY ZONE 2 | Wodpaper TR-1 |
| c. DENSTTY ZONE 3 | Wotpeper TR-1 |
| ¢ NON ZONE | Wertyper TR-1 |
| e. TOTALDSI | Woripper TR-1 |
| - (2) DS3 |  |
| 2 DENSTITY ZONS 1 | Wodppper TR-1 |
| b. DENSTTY ZONE 2 | Workpeec TR-1 |
| c. DENSTYY ZONE 3 | Wortyper TR-1. |
| e. TOTALDS3 | ${ }_{\text {Wostuper }}$ TR-1 |
| (3.) SIGNALING INTERCONNECTION | NA |


| DESCRIPTION | SOURCE |
| :---: | :---: |
| SPECIAL ACCESS BASKET |  |
| 1. PRICE CAP INDEX (PCI) | Woitprper PCle 1 |
| 2. ACTUAL PRICE INDEX (API) | Workpeper SR-1 |
| 3. SERVICT BAND INDEX (SBI) |  |
| A VOICE GRADR WATS, METALLIC \& TELEGRAPH | Workper SP-1 |
| B. AUDIO PROCRAM, \& VIDEO | Worspuper SP-1 |
| C. WIDEBAND ANALOG, * DIGITAL | NA |
| D. DIGITAL DATA. \& HCAP | Workpeper SP-1 |
| (1.) DS1 |  |
| - DEENSITY ZONE 1 | Wotkpaper SP-I |
| b. DENSITY ZONE 2 | Wortpaper SP-1 |
| c. DENSITY ZONE 3 | Wortpeper SP-1 |
| - NON ZONE | Wortpaper SP-1 |
| a. TOTAL DS1 | Wortipeper SP-1 |
| (2) DS3 |  |
| 2. DENSITY TONE 1 |  |
| b. DENSITY ZONE 2 | Workpeper SP-1 |
| $\therefore$, c DENSITY ZONE 3 | Wortpeper SP-1 |
| CNON ZOAE | Wortpeper SP-1 |
| e. TOTAL DS3 | Worlpaper SP-1 |
| INTEREXCHANGE BASKET |  |
| 1. PRICE CAP INDEX (PCI) | Waripeper PCI-1 |
| 2 ACTUAL PRICR INDEX (API) | Woikpaper IX-1 |

APPENDIXA WORKPAPER TOT-1

Puge 1 of 4

| 100 | Lool 8x |
| :---: | :---: |
| 105 | Ls Trun Ports |
| 110 | lafo Suphays |
| 115 | STP |
| 125 | TIC |
| 130 |  |
| 134 | TST Dendity Zome 1 |
| 138 | TST Danity 20002 |
| 142 | TST Deacity Zoce 3 |
| 146 | TST Deautyzooe 4 |
| 150 | TST Deanity Zoop 5 |
| 154 | TST Deneity 2one 6 |
| 158 | TST Damiky Zone 7 |
| 60 | VG. SW (noo-mpox) |
| 164 | VG DTt/RR Donait 2 |
| 8 | VG DTTIEF Dematy Zo |
| 172 | VG DTT/EP Dencity |
| 176 | VG DTT/RFP Penily |
| 150 | VGDTT/EF Deasity |
| 14 | VG DTT/EP Demily |
|  | vo DTT/Es Datety |
|  | HC Survicu Categey |
|  | DS1: SW (000-400w) |
| \% | DSI DTT Desuty 20001 |
| 232 | DSI DTT Dearity Zowe 2 |
| 236 | DSI DIT Dewhy 20003 |
| 240 | DSI DTT Deatity Zous 4 |
| 244 | DS1 DTT Deasity Zown |
| 248 | DSI DTT Dematry Zooe 6 |
| 252 | DS1 DTT Desaly Zoce 7 |
| 284 | DS3: 8W (n00-2000) |
| 288 | D\$3 DIT Dearty Zose I |
| 292 | DS3 DTT Deanity 70002 |
| 296 | DS3 DTS Desinty 20003 |
| 300 | DS3 DTT Dendity Zoco 4 |
| 304 | DS3 DIT Dearty Zoon 5 |
| 308 | DS3 DIT Deanly 20006 |
| 312 | DS3 DIT Dequilyziom 9 |
| 34 | HC Obar SW (manspoo) |
| 348 | HC Odere Deasity Zoce 1 |
| 352 | HC Obmar Denaty Zone 2 |
| 336 |  |
| 360 | HC Obmer Densty Zoce 4 |
| 364 | HCCOtum Deanity Zoce 5 |
| 368 | HCOhmar Dendy Zone 6 |
| 37 | HCOther Demedy 2000 |



| Sauces | Tow <br> (A) | Common Lide <br> (B) | Trafic Sqasidive <br> (C) | Truaking <br> (D) |
| :---: | :---: | :---: | :---: | :---: |

(B) (C)

WP Ts-1 a 19
WP TTH $14(1)$
WP TS-1 Q 19
WP TR-10(1)
WP TR
WPTR-1 $\alpha(K)$
WP TR-1 (K)
WP TR-1 $\alpha(K)$
WP TR-L $(10)$
Not Applicalle
Mot Applijeble
Not Applilemble
Not Applicable
WP TR-1 © (K)
Not Appliable
Not Appliable
Not Aypilable
Not Arphicotble
Not Applicable
Not Applicouble
WP TR-1 0(M)
WP TR-1 (K)
WP TR $=10(\mathrm{KM}$
WP TR-1 0 (G)
Not Applicable
Not Applicable
Not Appllicable
Not Aypllable
WP TR-1 OK)
WP TR-1 © (K)
WP TR-1 $0(k)$
WP TR-1 A(K)
WP IR-I (4)
Nox Applicelal
Not Appliceble
Not Applicelble
Nox Appliceble
Nox Auppliceble
WP TR-I C(X)
Not Applispbll
Not Applicoblo
Not Ayplimble
Not Afpicable
Not Applicaple
Not Atrplicable
Not Apploublo

## BELLSOUTH TELECOMMUNLCATIONS, NNC



Taycting Inputs mod Agergux Tump

$\qquad$
Total Common Lina Traflo Soontive
Tounking

| Soume |
| :---: |
| Not Applioble |
| Nox Appliemble |
| Not Apelifichl |
| Not Anpilouble |
| Not Appliath |
| Not Arpripoblin |
| Not |
| Not Appli |

100 Tow Tustion Scoditra-Ratrmad Rowin 10 \$wimbed TS Everey
15 Suteted Trapapitino
20 Locel 8umathen MoU


TR1ㄷ $206+210+230+240+260+270+$
$\left.(200+250+2 \times 0)^{+4} 4\right)$
430 LBC Tpapoat MOU
luput
40 Sm mathed TS Revpor MOU
 60 ATS Roy per MOU

4102620
4130130
$040+5450$
770 Teget Avg T8 MOU Rato
th Dificuco bet eurr ATS and Tury ATS
490 Mextrom Rovima to TMy
0 GDPPI
510 X
30 CLMOU Rownua (n) (EXCUUDING Mity) $540 \mathrm{R}(-1)$

Luput
$\operatorname{sex}(0,5460+1470)$


Input

Lepat
SUMILEA

3 Rovitril of Pior Yur Pooing
350 Inhth Targer Rodoctioc

355 Trasfar Taryeng Anown
360 Actpol Avilhble Toquectos Rovioue
570 Roverue Rearaining to Trex

( $1+(500-510 / 100)+540-507$

sprat

$490+560$

## BELLSOUTH TELECOMMUNICATIONS, NC

|  |  |  |  | APPENDOX A <br> WOREPAPBR TOT-I |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Pape 3 of 4 |  |  |  |  |  |
|  | Scarre | Total <br> (A) | Common Lhe <br> (B) | Trifle Senative (C) | Truoktag (D) |
| 593 Pemeentap Redeotion in 18 | Inpot |  |  |  |  |
| 600 spectiod LS Rovamo enauctioa | 4 Hatitis |  |  |  |  |
| 610 Amomat of Ciloulued LS Reduction | Mitareol |  |  |  |  |

300 Requatret TIC Rodretion

Ins Rofthat Amoont
720 Mithaman Ampate fels Brod
730 Maic Aviil trothac ATS Remonkion
500 Looll Swithing
03 LS Truak Poctic
810 Laft Surchry
815 STP P
E23 TIC
830 Traden SW Tprt (roon-200w)
834 TST Duasity Zone 1
338 TST Density Zoxte 2
82 TST Demsity Zoce 3
46 TST Denily Zome 4
50 TST Denatityzones
54 TST Deanty Zoxe 6
SS8 TST Denity Zooe 7
362 VG: SW (000-2000)
VG DTT/BP Demsty 20001
70 VO DTT/AB Dantig 20002
74 VG DTITER Damity 20003
VGDTT/BF pendy 20004
386 VGDTT/BF D Denty Zome 6
190 VG DTI/EF Demety zone 7 VO DTT/EF Damery 20 HC Servet Crepry
926 DSI: SW (sob-2000)
334 DSI DTT Deowhy:Zom 2
938 DSI DTT Deanty Zone 3
92 DSI DTT Dearlyz Zose 4
946 DS1 DTT Desuty Zous 5
950 DS1 DTT Danery Zome 6
954 DSI DIT Dwoshy Zoos 7
$\Rightarrow \operatorname{lin}(45004,1232)$



nas-tisio


lipput (thould be equit to 1700 )

| lopar |
| :--- |
| loput |


| luppat |
| :--- |
| Luput |

liput
tim

$i$
lapot
lnpurt
lnpeat
Input
Input
lapuat.
Lapput
Inpput
lopat
lipput
lenat
lapuat
lepur
tappur
loput
lipprat
linut
lippot
Luput
apput


11120 Ropoeso ATS Rovo
$100+51100$
$460+\pi \mathrm{mm}(\mathrm{r} 800 \mathrm{r} 815) \mathrm{r} 420+\operatorname{axn}(3825.11094) / 430$

## BELBOUTH TELECOMMUNICATIONS, INC

Pape 1 of 1


600 ODP-PI
610 Proderidity Fector (X)
620 GOR-PI - X
$5 s 0$ Existing PCI

10 Data Z
$720 \mathrm{R}(\mathrm{H}-1)$

740 Dota ZK


TOT1, rSO 0
 $500-510$

WP SUMAACOI (B)

EX01,cs
WP SLIMAACOI (A)

110r7200100
$100+740$
$7300 \mathrm{r} 620 / 100$

350 Tampad Roverwe Differsectic
970 Prop. PCI (NoaExog Only. Ammal Flity 8Bi Upper Limit cukaintious only) 980 Propoend PCI

Toriri100
col.bece: r6ec; col.d: rs $80 \%(1+1620100)$
col. betcor.16807(1+7740100+19501720) cold\&e::650*(1+77601100+1740/100)

I


1

USF Adjustment - Revidion 1 Purt 2 (USAC Recelpt/CCL Claxage)
PRICHOITIOESXISTNGGAND PROROSED RATFS-TRAJUC SENSTHYE BASKET



TRAFFIC SENSTITVEBASKET

| Reat Hean Num | Stue | Zowe | Desertption | USOC |
| :---: | :---: | :---: | :---: | :---: |
| (A) | (B) | (C) | (D) | (E) |
| 0602182000 | BS | 0 | ISMDI - per HOA - 1200 bend - fint | AVESI |
| 0502183000 | BS | 0 | ISMDI -per HOA - 1200 bend - mubs | AVBSI |
| 0602181000 | BS | 0 | ISMDI - prat HCA - 1200 baxd | AVBS! |
| 0602185000 | BS | 0 | ISMDI - per HOA - 2400 beod - init | AVBS2 |
| 0602186000 | BS | 0 | ISMDI - per HOA - 2400 bend - aube | AVBS2 |
| 0602184000 | BS | 0 | ISMDI - par HOA - 2400 Bman | AVBs2 |
| 0602188000 | BS | 0 | LSMDI - par HOA - 4800 baud - mit | AVBS4 |
| 0602185000 | BS | 0 | ISNDI - per HRA - 4800 bead - auts | AVBS4 |
| 0502187000 | BS | 0 | ISMDI - per HKA - 4800 brad | AVBS4 |
| 0602191000 | BS | 0 | ISMDI - per HOA - 9600 band - init | AVBSs |
| 0602192000 | BS | 0 | ISMDI -par HGA - 9600 bud - arbs | AVBS9 |
| 0602190000 | BS | 0 | 1SMDI - par Higa - 9600 bmad | AVBS9 |
| 0602194000 | BS | 0 | ISMDI - par HGA - 9.0Klbst - imit | AYBs6 |
| 0602195000 | BS | 0 | ISMDI - pr HOA -9.0Klipe - preb | AVES6 |
| 0603193000 | BS | 0 | LSMDI - per Fica-9.6 Krps | AVBS6 |
| 9990600042 | BS | 0 | ISMDI - SS7 Pout Code for MWI - init | AVBSM |
| 9990600043 | BS | 0 | ISMDI - SS7 Poome Codo for MWI - albe | AVBSM |
| 0602106000 | BS | 0 | Surrogate Client Num - per Num - init | SMV |
| 0602107000 | BS | 0 | Surropup Cliam Num - por Num - wibe | SMV |
| 0602105000 | BS | 0 | Suropat Client Number - per Number | SMV |
| 0602108000 | BS | 0 | BCID - par Arnmemert - liit | NXK |
| 0502109000 | BS | 0 | BCUID - par Almagement - subt | NOK |
| 0602710000 | BS | 0 | BCTID-pt.Mesmege |  |
| 0602112000 | BS | 0 | Queving - per MFIG - truit | QLMHG |
| 0602113000 | BS | 0 | Quouing - per M MFG - wibs | QLMHG |
| 0602111000 | BS | 0 | Quouing - por Mutitine Humt Croup | QLMHG |
| 0602115000 | BS | 0 | Quexing - per MHCO w Delisy - mit | QLHDA |
| 0503116000 | BS | 0 |  | QLHDA |
| 0602114000 | BS | 0 | Quening-permultiline Furt Grw/Deliny | QLHDA |
| 0602118000 | B8 | 0 | Queudigy -per MEFO w Coll What - trit | QLHCW |
| 0602119000 | BS | 0 | Quaunt-pomMFGw/ Chll Whit - mbs | OLficw |
| 0600117000 | BS | 0 | Quening-par MAG w/ Call Waitins | QLHCW |
| 0602221000 | BS | 0 | Quoung-pemHicw Dei a CWL - bit | QIHCD |
| 0502122000 | BS | 0 |  | QLHGD |
| 0602120000 | BS | 0 |  | QLHGD |
| 0602123000 | BS | 0 | Queocins - per lime Armped - tith | QSC |
| 0602124000 | BS | 0 | Queuing - perLthe Atrriped - Mubs | QSC |
| 0602125000 | BS | 0 | Quraving - Doliy Announce - per Chan | BEXPC |
| 0602126000 | ES | 0 | Queuing - Dolay Ampounce - per Trik | BEXPT |
| 0602127000 | BS | 0 | Que - Musienetor Doltry - per Chan | BE2PC |
| 0602128000 | BS | 0 | Quan - Muric ater Delay - per Truk | BE2PT |
| 0602129000 | BS | 0 | Que-Call Whiting Indication | A70 |

USF Adjertment - Requiden 1 Part 2 (USAC RecofptICCL Change)


| 12an Hemenum | Stane | Zove | Descripetion |
| :---: | :---: | :---: | :---: |
| (A) | (B) | (C) | (D) |
| 0600131000 | BS | 0 | Usoct Tremex - par Peth - init |
| 0602132000 | BS | 0 | User Tramerer-par Puth - aibe |
| 0602130000. | BS | 0 | Uare'Tentila - par Puth |
| 0602134000 | ES | 0 | User Trandee - per Puth waSMAD - init |
| 0602135000 | BS | 0 | User Thinder - par Puth wSMDI - min |
| 0602133000 | BS | 0 | User Truottie-par Pexh wSMDI |
| 0602137000 | BS | 0 |  |
| 0602138000 | BS | 0 |  |
| 0600136000 | BS | 0 |  |
| 0602140000 | BS | 0 | Mk Buginithe Trus - peeCO.Am- init |
| 0608141000 | BS | 0 |  |
| 0682139000 | BS | 0 |  |
| 06002143000 | BS | 0 | Etablitimeat ofDID wLSESA - fin |
| 0002112000 | BS | 0 | Hesthlibhman of DID whersa |
| 06002145000 | BS | 0 | Eech Addr troup of 30 DID Numbert - init |
| 0602146000 | BS | 0 | Einct Mdell Group of 20 DID Wumbati - suts |
| 0608144000 | BS | 0 | Bacti Addit Cioup of 20 DID Numberi |
| 0602147000 | BS | 0 | Eecoblich 2 wry Limoride Sve - init |
| 0602145000 | BS | 0 | DID or DIMDOD Trunk Temm - mit |
| 0602148000 | BS | 0 | DID or DIDPDOD Trunk Term |
| 0602150000 | BS | 0 | DTMF Stapuliny-par Tix Tomu |
| 0602151000 | BS | 0 | MF Siguting-por The Term |
| 0602164000 | BS | 0 | Answer Suparvidica - par Puch - init |
| 0602165000 | BS | 0 | Anawer Supervision - per Puth - Exha |
| 0602163000 | BS | 0 | Answar Suparvisico - par Puch |
| 0000152000 | 日S | 0 | ANI - per Momage |
| 0602154000 | BS | 0 | Etab ofDID W/LSBSA (WAL) - tait |
| 0002153000 | BS | 0 | Entb ofDID WLSBSA (WAL) |
| 0602156000 | BS | 0 | En Adil Gr of 20 Dib Mumbers(WAL) - trit |
| 0608157000 | BS | 0 | Ea Addr Gr of 20 DDP Numben(WAL)- mibe |
| 0602155000 | Bs | 0 | Eeddy Grof 20 DiP Numbers (WAL) |
| 0602158000 | BS | 0 | Fet 2 wiy thoode Sve(WAL)- imit |
| 0608160000 | BS | 0 | DID orDIDMOD Trak Temm (WAL)-mit |
| 0602159000 | BS | 0 | DD or DIDPOD Trunk Term (WAL) |
| 0602161000 | BS | 0 | DTMP Siz-par Tis Toum (WAL) |
| 0602162000 | BS | 0 | MF Siry-par Tik Temmendi) |
| 0605500000 | BS | 0 | 900 Acc Sve NXX Activation Chg - it NDXX |
| 0605510000 | BS | 0 | 900.Acce Sve NXX Activation Chy + add NXX |
| 0606010000 | BS | 0 | Informetion Surchurg/ 100 MOU - Proch |
| 0606020000 | BS | 0 | Infumation Surchareh100 MOU - Trene |
| 0601282000 | BS | 0 | 500 Acc Sve/ NXCX - per EO \& Tndm-NR |
| 0605020000 | ES | 0 | 500 Cust ID-perchll |

USOC USO
(E)
E13 E13 E 13
E 13 E13 E13UT Bizut EI3UT A9ANT A9ANT NANNT A9AOC ASACC A9ACC NDZ
NDZ NDA ND4 ND4
NEF NDT
NDT SSDBD SLIBD USWIX USWIX USWIX NRicN NDZ ND2 NDA ND4 ND4 NEF NDT NDT SSDPD S5MBD NaIX NgGAX

APPENDIX A
WORKPAPER TS-I


USF Adjnutment - Revision 1 Part 2 (USAC Rocefpe/CCL Champ)
APPENDDX A WORKPAPER TS-1


| Ruth Elem Numa | State | Zome | Demeriptive | USOC |
| :---: | :---: | :---: | :---: | :---: |
| (A) | (B) | (C) | (D) |  |
| 0605022000 | BS | 0 | 500 Ace Svo NXX Activation Chy - in NXXX | NSTIX |
| 0605623000 | BS | 0 | 500 Aco Sro NXX Activution Che - add NXX | nsanx |
| 0605002000 | BS | 0 | 800 Acc Sve w/b00 Num Del - pere Quer |  |
| 0605004000 | BS | 0 | B00 Act Swo w/so0 Thum Dal w/Vr-per Quer |  |
| 0605008000 | BS | 0 | $500 \mathrm{Aco} \mathrm{Sve} \mathrm{wi/POTS} \mathrm{Del} \mathrm{-} \mathrm{per} \mathrm{Ouer}$ |  |
| 0605008000 | BS | 0 | 800 Acos Svew/POTS Dai wivr-per Quer |  |
| 0608830000 | BS | 0 | BellSouth LNP Dataheso Servicet-Per Query |  |
| 9990500041 | BS | 0 | LNP Quary Seesion - Oit of Repica |  |
| 0605080000 | BS | 0 | BollsouthiLNP Cult Roumin Servico - per call |  |
| 0506000000 | Bs | 0 | DA Acoces Service Call-eech |  |
| 0506300000 | BS | 0 | EWP UxerID Charge - per ID |  |
| 0906310000 | BS | 0 | Eloctronio White Prear - per Screan |  |
| 0906320000 | BS | 0 | DADAS Service Etrabitienment Charge - NR | DBSDE |
| 0506330000 | BS | 0 | DADAS Datibma Service Charge - per mon | DBSDS |
| 0506340000 | BS | 0 | DADAS per Quary Chreo |  |
| 1380044900 | BS | 0 | AMS - Berie Service | SESBC |
| 13A0044900 | BS | 0 | AMS - Basic Service | SESBC |
| 1380045000 | BS | 0 | AMS - Hasic Servico (NR) | SESBC |
| 13A0045000 | BS | 0 | AMS - Besio Service (NR) | SESBC |
| 1350046400 | BS | 0 | AMS UneriDn - 1at 15 | UIGIA |
| 13A0046400 | B3 | 0 | AMS Userids - las is | U1G1A |
| 1350046600 | BS | 0 | AMS User IDs - Ench Addl Set of 5 | Uigan |
| 13A0046600 | BS | 0 | AMS Usar Dis - Bech Addl Sot of 5 | ULCAA |
| 1350047000 | BS | 0 | AMS Port Access - Dinled/Shared | MDQ |
| 13A0047000 | BS | 0 | AMS Port Aocom- DislodShmed | MDQ |
| 1350047100 | BS | 0 | AMS Port Accers - Dialed/Shured (NR) | MDQ |
| 13A0047100 | BS | 0 | AMS Puat Accese - Dinled/Shered (NR) | MDQ |
| 1350047500 | BS | 0 | AMS Port Accese - Dedicmed | MD6 |
| 13A0047500 | BS | 0 | AMS Port Access - Dodicatod | MD6 |
| 1350047600 | BS | 0 | AMS Port Acosee - Dediched (NR) | MD6 |
| 13A0047600 | BS | 0 | ANS Port Accose - Dedicred (NR) | MD6 |
| 1350048300 | B8 | 0 | ANS Pred \& Sve Informexios | MBSPM |
| 13 A0048300 | BS | 0 | AMS PTod \& Sva Information | Mespm |
| 1350048400 | BS | 0 | AMS Prod \& Sve Ifformation (NR) | MBSPM |
| 13A0048400 | BS | 0 | AMS Prod \& Sve Infermation (NR) | MBSPM |
| 1350048900 | BS | 0 | AMS AmP Svo Order Stuas | MBSSM |
| 1340048900 | BS | 0 | AMS Aco Sve Order State | MBSSM |
| 1350049000 | BS | 0 | AMS Aco Svo Onder Stane (NR) | MBSSM |
| 13A0049000 | BS | 0 | AMS Aco Sve Order Stmus (NR) | MBSSM |
| 1356049200 | BS | 0 | AMS Acc Billing Info | MBSLM |
| 13A0049200 | BS | 0 | AMS Acce Billimg Info | MBSLM |
| 1350049300 | 日S | 0 | AMS Anc Billing lnto (NR) | MBSLM |

USF Adjastoment - Revision 1 Part 2 (USAC RecolptiCCL Change)
PRICROUT OR IXXITINGAND PROROSTD BATES-TRAFIC SINSTIIVE BASKET

## Rate Flem Num State Zode Desertpition

(A)

13 A0049300 13 A000
1300051700 1300051700
1300052100 1300052100
1300036400 1300036400
1300036500 1300036500 9991300003 9991300004 9991300001 9991300002 9991300006 991300007 9991300008 $\$ 991300009$ 19010200000 1901040000
1901100000

```
(B) (C) (D)
© AMS Aoc Biliting Info (NR)
\[
\begin{aligned}
& \text { BS } 0 \text { Invernetional Cell Blocking- Suby } \\
& \text { BS } 0 \text { BNA fir ANI a }
\end{aligned}
\]
```

```
\[
\begin{array}{ll}
\text { BS } & 0 \\
\text { BS } & 900 . S \mathrm{ve} \text { Bloching - PBXFFA Lines } \\
\text { B } & 900 \text { Svo Blocting - Centrux Lives }
\end{array}
\]
\[
\begin{array}{lll}
\text { BS } & 000 \text { Svo Blocking - Cedtox Linct } \\
\text { BS } & 0 & \text { Flodid Answar Supervition (NR - S }
\end{array}
\]
\[
\begin{array}{lll}
\text { BS } & 0 & \text { Flocide Anower Supervisina (NR - Subs) } \\
\text { BS } & 0 & \text { Flaridi Answer Supervision - MTM }
\end{array}
\]
\[
\begin{array}{lll}
\text { BS } & 0 & \text { Flaridit Answer Su } \\
\text { BS } & 0 & \text { BOLS pte quary } \\
\text { BS } & 0 & \text { Odineting point o }
\end{array}
\]
```

```
BS O LNP Find User Iho Chris - PBX Track - ont
\[
\text { BS } 0 \text { LNP Rind User Une Cheryrimary Ruto ISDN Laterf }
\]
```

```
BS O LDBC Common Tranpart -por Quey
\[
\text { BS } 0 \text { IDE Validndo - per Quary }
\]
BS 0 LIDB Oxidnein Pofnt Code Eti/Chenge
```





$9900023 v_{d}$ soxvg



Ryity pearix






700
710
70



0L000 2and sanvg

##  <br>  <br> 

| $\begin{aligned} & 1200 \\ & 2220 \\ & 1260 \end{aligned}$ | Cos-181 <br> Troduetivity Retor (x) Confoll - X |
| :---: | :---: |
| 1300 | melatiog mer |
| $\begin{aligned} & 1220 \\ & 1404 \end{aligned}$ | $\begin{aligned} & \text { Dolve } \\ & x(z-2) \end{aligned}$ |
| $\begin{aligned} & \text { ceso } \\ & 1590 \end{aligned}$ | $\begin{aligned} & \text { Doles z/k } \\ & n=(\text { mep }-\mathrm{pI}-x) \end{aligned}$ |

1900 zargucta mivemue ditfersantisi
 1940 mososion $\mathrm{Fc}{ }^{2}$


Lendecoppe mote.




##  <br>  <br> trout


1 Inert





r0sorzs60



 2570-6010







T0Trar200

 $\qquad$
$\qquad$ $\square$

|  | Price cap Furite mouncor Pima <br>  |  |  |
| :---: | :---: | :---: | :---: |
| sourom | rocal <br> (4) | Cinaman hime |  |
|  |  |  |  |
| vratrzope |  |  |  |
| Emiletinot |  |  |  |
| maxitiot |  |  |  |
|  |  |  |  |
|  |  |  |  |
| 2712, mum(r12008., ¢12308) |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| parin, Mumixitile . 11469 ) |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Rtri, |  |  |  |
|  |  |  |  |
| (1021, |  |  |  |
|  |  |  |  |
|  |  |  |  |
| 8711, sun(x17218. . $\times 17241$ ) |  |  |  |
| Re72, sum(x17418...x17449) |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| kTIL, mun(x10316...r1234) |  |  |  |
|  |  |  |  |
| Krini, |  |  |  |
| xTai, |  |  |  |
| xT31, tuan(x1961f...11664f) |  |  |  |
|  |  |  |  |
| 1471, |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  | - |
|  |  |  |  |
|  |  |  |  |






```
M14\pi[-7560a, 5125a)
```




Pun 3000 ehrw 2094


 1



04/23/2001

Mrion ap faritt newiom jlian

arpecut zoseat zevarue zffect



等

1






00/73/2001






## -










,





530 gente 800
$\$ 60$ Other 200 merrice
sue rockil Datebase horvice catisgory

Inlinog yand and rodrata (man) Catopory  ..... 11993
10951697
tocar surtctung rinak fort. ..... 1999
199

970 geeal 51 makem


$$
-{ }^{04 / 25 / 2001}
$$




1070 ITC OCmar



| 1932 |
| :--- |
| 1923 |
| 2921 |
| 1923 | 2937

2931
1939






2312
2314
2311
2122

2332
${ }^{12330}$
2342

## 

2362
23:

:



mi manra
Mille facioy











Dan. DTT/ET Denasty nowe 31

rocel Del drifay Dis sub-cractory





##  <br>  <br> 3)





|  |  |
| :---: | :---: |
|  | (ג) |
|  |  |
|  | //a |
|  | 8/4 |
|  | x/2 |
| 24es sig. IC 931 <br> 2490 319. IC Oppar tai Lumat | $\pi / \pi$ |
| 2970 gotal Imunking meakot | \%/a |
| 2)to Total Trunkigg Ats 2950 Totel Trunking PCI | ${ }_{* / \wedge}^{* / \wedge}$ |










Mudio 6 viden Earrice category.
nudio/Video Danaity zoce 2

4217 TDeal Ruato/viaco pz1 dub-critagory


| Nudio/video Demelty 10002 |  |
| :---: | :---: |
| 421 mudio/video bat phat Tern <br> 1222 hudio/tideo Det meteroto Traneport - |  |
|  |  |
|  | w/ |
|  |  |
|  |  |
|  | M/A |

4110





|  | $\begin{aligned} & \text { Rage } \\ & \text { prexion } \\ & \text { Denuep } \end{aligned}$ |
| :---: | :---: |
| mudio 4 viseo servioe Catogary |  |
| nudioflideo Deasity toon 4 | (a) |
|  | 0 |
|  |  |
|  | $1 / 4$ |
|  |  |
|  |  |
| 4274 | //A |
| 4278 Nudio/vieco pxi | N/A |
| Audio/viden Danelity zome 3 |  |
| 2261 Mudio/viden 883 Cran Torm | 0 |
|  | : |
|  | $4^{\circ}$ |
| 4214 Mudia/Nidea dis Otbar | I/A |
| 4297 ToEni Rusio/video D23 sub-Catagory | \%/A |
|  | / $/$ A |
| 4259 رuclo/visea dz3 dppor simit | \%/^ |




|  | \%/4 | \%/ | \#/4 | m/ | - | - | 0 | M/x |  | 7/4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \%/ | \%/8 | \%/ $/$ / | \%/a | \%/2 | \%/ | 1/2 | ${ }_{0}^{0.00000} 0$ | $4_{6479}^{414}$ | $\underset{\sim / 2}{x / \lambda}$ |
| aig IC Density ceno 3 <br> Total ala TC 0zt tub-Category | 3/4 | 1/ג | \%/ | m/n | 0 | - | 。 | 8/ | D52, Ppectal Moceste Densify zone 32 |  |
|  | \% | $\underset{\sim}{8 / A}$ | ///4 | \%/8 | \%/a | \%/ | \%/ | 0.0000 |  4414 del apman oxs orthx | $n /{ }^{\circ}$ |
|  | / | 1/8 | N/2 | */A | - | - | - | \#/a |  | \%/4 |
|  | \% $/$ / | \% | \%/ $/$ / | H/ | 1/8/ | \% | M/A | $\begin{aligned} & 8.00000 \\ & 0.80000 \end{aligned}$ | 44, | \%/ |
|  | \%/ | m/ | x/ג | \%/8 | - | - | - | -1/ |  |  |
|  | \%/A | / / / | \#/ | \%/a | \%/A | $8 / 4$ | $x / \mathbf{n}$ | 0.0000 0.6000 |  | m/a |
|  | \% | */ | n/ ${ }^{\text {a }}$ | * | - | - | $\bigcirc$ | 3/2 |  | \%/ |
|  | \% | \%/2 | 7// | $x / \mathbf{A}$ | 3/4 | / | \%/A | $\underset{\substack{0.00000 \\ 0.0000}}{ }$ |  | \%/ |
|  <br>  | /1/ | \%/a | \%/a | \%/n | \%/A | \%/2 | M/A | 1/2/ 0.000 0.0000 |  | : |
|  |  |  |  |  |  |  |  |  | 4537 Tueal DR1 Apoce DS7 Aub-Caveqory 4531 Des epece DIt tubinding 4539 det exte DET pppor hitit | $1 /: / \pi$ |

## 

## 

Hgh ap 40 other berrion crategary


rocel min


Sen, DTT/RED Danercy moce 2.



Des, ext/ki mombley zono 31



priou capa faritit retriew plum

mage 21 of 40 ,

|  | $\begin{aligned} & \text { pans } \\ & \text { privion } \\ & \text { DRINOD } \end{aligned}$ |
| :---: | :---: |
|  | (a) |
| Atgrailipg imerionmection |  |
|  | 1/2 |
|  | 1/x |
| 2400 Docat mimelitioq iatarcommectice arm | n/a |
| 24B5 Big. TC ant <br> 2410 ate. ic 0pper mien Litatt | /1/ $/$ / |
| 2970 Torel Trumkidig mankot | k/ |
| 2gto tpend Iruokipg hig 2550 toesl Tmuxing nci | $\pi / \lambda$ |



##  <br> TOTAL D81 en sub-category

Das mix mablidex







D93. DTI/Lip Denelity rone 2,

soctl pes bry/fy in sub-catepory


DE3, DET/ES Denesty Jone $1:$

ve apeotal danality cone 2


- ,









| PIg yc din doper Limit | 3／2 | \＃／A | 1／4 | x／8 | ＊／ | \％／4 | ＊／2 | 0.0000 | H64 peat mpec Di4 Othor | \％／ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ifg IC Dentity Fond $2_{i}$ <br> rotal lig IC bet \＃ub－category | \％／2 | \％／4 | \％ | \％／A | 。 | － | 。 | \％／ |  | M／A |
| Ag tC bea eubindax | \％／8 | \％／ | \％／R | \＃／2 | 1／8 | \％／8 | \％／$/$ A | $\begin{aligned} & 0.00000 \\ & 0.0000 \end{aligned}$ | $4{ }_{477}^{4}$ | \％／ |
|  | m／2 | ／4 | m／a | m／2 | $\bigcirc$ | 。 | － | \％／4 | Dith．Hpectill heotea Detility toon 5： <br>  |  |
|  | \％／$/ \mathbf{/}$ | $\underset{\sim}{\pi / R}$ | ://ג | \％／A | \％／ | \％／A | m／$/ \boldsymbol{\sim}$ | $0.0000$ |  | $1 /{ }^{\circ}$ |
| Hy IC Datipity Eona it | 1／n | \＃／2 | m／a | 1／8 | 。 | 。 | 。 | 1／2 |  4480 Dei aper Dis suindian | \％／8 |
| oig ic Dr：fubleotar <br> Hif It DEA Opper Limit | $\underset{\sim / \sim}{\sim}$ | ／／a | \％／8 | $\sqrt[\pi / 2]{1 / 2}$ | \％ | \％ | \％／8 | 0.000000 |  | ／ |
|  | n／n | \％ | m／a | m／a | 。 | $\bigcirc$ | 。 | m／2 | DE1，Hpwetal Aodegs Dandity Eloce 6： 4501 Dit Apeo 0ed Charriex |  |
|  | \％／ | \％ | \％／A | H／A | \％ | 1／A | $\sqrt[x / a]{x / a}$ | $\begin{gathered} 9.0000 \\ 0,6008 \end{gathered}$ |  | $x /{ }^{\text {a }}$ |
|  | m／n | －／ | M／A | \％／A | － | $\bigcirc$ | 。 | m／ג |  431 Des freo Dte Mubindak | $\boldsymbol{n} / \boldsymbol{\lambda}$ |
|  | $\underset{\sim}{* / 4}$ | \％ |  |  | ／1／$/ \mathbf{A}$ |  | $\mathbb{x / A}$ | $\begin{aligned} & \text { a.00000 } \\ & 0.00000 \end{aligned}$ |  | H／ |
| sig ic menalty tone 7 <br> rbeal B1F IC DE7 Iub－Carepory | 1／1 | H／a | \＃／2 | \％／4 | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | \％$/$ |  4372 pasi |  |
|  | m／n | ma | $\underset{\sim / \pi}{1 / 2}$ | \％ | $\boldsymbol{x / 1 / 2}$ | ／／in | \％／ | $\begin{aligned} & 0.00000 \\ & 0.00000 \end{aligned}$ |  | $\pi / 8{ }^{\circ}$ |
|  |  |  |  |  |  |  |  |  | 4537 Tutal Del spac D87 eub－Coteqory <br>  | $\underset{\mathbb{Z} / \mathbb{A}, \mathbb{A}}{\substack{n}}$ |









| : | \% | \% | 1 | 1 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \% | : | : | \% | : | \% |  |
| \% | \% | \% | ! | ; |  |  |
| : | \% | : | * | $\pm$ | : |  |



|  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mollurix | Thythen |  |  |  | nexin |  |  |  uman | $\begin{aligned} & \text { Cuntint } \\ & \text { hatyes } \end{aligned}$ |  |  |
| (1) | 9 | (1) | (i) | (i) | (a) | (i) | Hidebend carrice caregory | (i) | (8) | (c) | (1) | (8) |
|  |  |  |  |  |  |  | -a denatro toon 2 |  |  |  |  |  |
|  |  |  |  |  |  |  | ming1 Chyyy <br>  Hebition | ${ }^{\circ} /{ }^{\circ}$ | 明 | (1/2 | \%/8/ | : |
|  |  |  |  |  | - | -- | TuEaL, MB HEL Ab-Cateqory <br>  |  | \%/ $/$ / | \% | \% | \% |


|  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  5 | $\begin{aligned} & \circ \\ & 0 \end{aligned}$ |  |  |  | : |
| 5037 Tocal whe Dre mb-Category <br>  sorention oypar' tiase |  |  |  | / / | $\underset{\sim / \sim}{\text { m }}$ |
| mi Desaty 20003 3: |  |  |  |  |  |
| sown win but chumbin <br>  SMi wh, Dis otior | \% ${ }^{\circ}$ |  | 1/n | \%/ | : |
| 3057 Rocen $m$ pry pancletapry <br>  | $\underset{\substack{x / 2 \\ x / 2}}{\substack{n}}$ |  | \% | \% | 0 \% |





```
llloll
```






price cape tariti Revicu pran





Bates Page 00132






04/23/2001















|  |  | nimax |
| :---: | :---: | :---: |
| (7) | (6) | 『) |
| ! | : |  |
| $w / \dot{\sim}$ |  |  |
| ! | : |  |
| \% | \% |  |
| : | : | $\underset{\sim}{\text { \%/A }}$ |
| $0$ | in | $\substack { \text { onf } \\ \begin{subarray}{c}{\text { 0,000 } \\ 0,0000{ \text { onf } \\ \begin{subarray} { c } { \text { 0,000 } \\ 0 , 0 0 0 0 } } \end{subarray}$ |
| : | : | $\underset{y}{x / \lambda}$ |
| $\sin _{i}^{2}$ | $x_{x / \boldsymbol{n}}^{0}$ |  |


$z 7100 \operatorname{can}_{d} \operatorname{sing}$

$A B C$



Bates Page 00145

| ： | \％ |
| :---: | :---: |
| \％ | \％ |
| ！ | 寉 |
| ， | \％ |
| ！ |  |
| \％ |  |

## $1 / \mathbf{1 / 2}$






| ${ }_{\text {cose }}{ }^{10}$ | ${ }_{\text {cosic }}$ | mase 1 |  |
| :---: | :---: | :---: | :---: |
|  |  |  | 誛楊 |
|  |  |  |  |
|  |  |  |  |
| \％ | \％／a | \％ | ／ |
| \％／in | \％／ | ／ | 隹 |
| \％ | \％ | ＊／ | x／in |
| ＊ | 楊 | \％／$/$ | x／i／n |
| 缺 | 邪去 | 狻 | 詻 |



| and |  |
| :---: | :---: | :---: |
| $\vdots$ | $\vdots$ |
| $\vdots$ |  |

: A


$$
\begin{aligned}
& \begin{array}{lll}
\vdots & \vdots & 1 / / 2 \\
\vdots & \vdots & 1 / / 2 \\
0 & 0
\end{array}
\end{aligned}
$$

|  |  | nowt |
| :---: | :---: | :---: |
| (n) | (6) | (a) |
| : | $\begin{aligned} & 0 \\ & \vdots \\ & 0 \end{aligned}$ | \%/ |
| $\underset{\sim \sim}{n}$ |  |  |
| : | ! | HA |
| $\underset{x / A}{x i n}$ | $w / i$ |  |
| : | : | \%/8 |
| $\mathbb{\pi / \mathbf { R }}$ |  |  |
| 0 | - |  |
| $\underset{\pi / i / \pi}{0}$ | $\underset{\sim}{*}$ |  |




$$
\begin{aligned}
& \text { OSIOO }{ }^{230}{ }^{2} \text { sazyg }
\end{aligned}
$$





```
Analyza
```
\(\qquad\)
``` rex nes
```



$A B C$







| nep, of 16 | ur | ne | sata | nes |
| :---: | :---: | :---: | :---: | :---: |
|  | 0.00000 | mm | 0.0000 |  |
|  |  | 0 | 0.000 |  |
|  | 0.00000 | mim | 0.0000 |  |
|  |  | 0.0000 | 0.000 |  |
|  | \%,09008 | 颱 | 0,000 |  |
|  |  | 0.0000 | 0.000 |  |
|  | 0.:0000 | min | 9.000 |  |
|  |  | 1000 | 0.000 |  |
|  | 0.0020 | man | 0.0000 |  |
|  |  | 0.0000 | 0.000 |  |
|  | 8:00000 | $\cdots$ | 0.000 |  |
|  |  | 0.0000 | 0.000 |  |
| 边 | 0.0800 | mom | 0.0008 |  |
| $x^{\text {a }}$ |  | 0.0000 | 0.000 |  |


|  | : | $\cdots$ | Datise |
| :---: | :---: | :---: | :---: |
|  | 0,0000 | $\cdots$ | 0.000 |
|  | 0.00000 |  | 0.008 |
|  | 0.000008 | ${ }^{\text {mamem }}$ | 0:080 |
| $0=2$ <br>  | 0.0000 | *m | 0.000 |
| - 0 pexay <br>  | 0.0000 | $\cdots$ | 0.00\% |
|  | 0.00008 | $\underline{m m m}$ | 0.000 |
| man perity ceiod 3 . <br>  | 0.0.000 | mam | 0.0000 |







## priptame






(fixition than_xasgent



# ITC $^{\wedge}$ DeltaCom's $1^{\text {st }}$ Production of Documents 

Item No. 5

Proprietary

ITC^DeltaCom's $1^{\text {st }}$ POD
Item No. 5

The entire document is Proprietary

