

# **Expert Report of Larry Thompson**

*Prepared for*

*Civil No. 04-3014, U.S. District Court,  
District of South Dakota, Central Division*

***EXHIBIT 5***

**Venture Communications**

**InterMTA Traffic Analysis  
(Based on CDRs)**

**Analysis Summary & Results**

Version 1.0

Prepared by



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## 1.0 Executive Summary

The purpose of this document is to detail the process Vantage Point Solutions (VPS) is using to analyze the wireless traffic terminating in the state of South Dakota to Venture Communications (Venture). These calls originate from a [REDACTED] mobile customer and terminate to a landline customer of Venture.

This document is prepared to assist the parties in determining the amount of InterMTA traffic that is delivered to Venture by [REDACTED]. This traffic may terminate to Venture via either a direct interconnection or an indirect interconnection (typically Qwest).

## 2.0 Calculations Based on CDR Records

The CDR records are the traffic records collected by [REDACTED] from their network that was delivered to Venture. The records were to not include traffic delivered via an interexchange carrier (IXC) and include only answered wireless to wireline calls. Appendix A shows the detail of how [REDACTED] gathered the CDRs for the analysis. The CDR records we received from [REDACTED] did include the MTA information of the initial cell site serving the wireless end user at the start of the call and the state as well.

The time period utilized in this study was from October 1, 2004 through October 15, 2004 and is based on minutes of use not via number of calls. The InterMTA factor calculated for Venture based on the criteria mentioned above is [REDACTED]%, as shown in Figure 2.1 below.

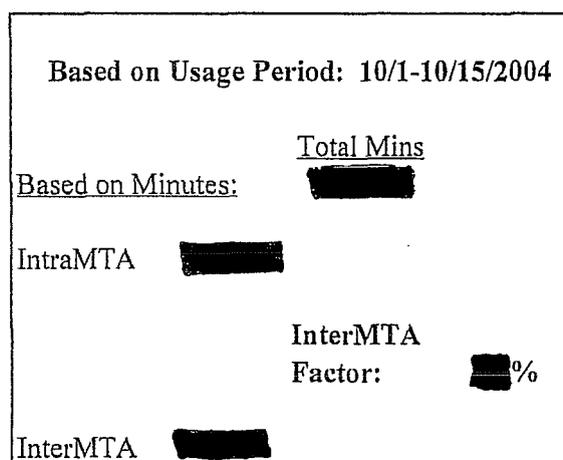


Figure 2.1 Venture InterMTA Calculated Factor

## 2.0 Calculations Based on CDR Records (Continued)

We calculated the total minutes of use and then broke out via interstate and intrastate rates that would be applicable. Per our findings, listed in Figure 2.2 below for Venture, █% would be considered interstate billed at the current National Exchange Carrier Association (NECA) rates and █% would be considered intrastate and billed at the current Local Exchange Carrier Association (LECA) rates.

	<u>Minutes</u>	<u>% Based on MOU</u>
InterMTA - In South Dakota	█	█%
InterMTA - Not in South Dakota	█	█%
<b>Total InterMTA</b>	<u>█</u>	<u>100.00%</u>

**Figure 2.2 Venture Access Rate Percentage Calculations**

### 3.0 Goals

The goal of this analysis is to determine the volume of InterMTA calls that originate with a [REDACTED] customer and terminate to a Venture customer and to calculate the percentage of total InterMTA Traffic.

**Major Trading Area (MTA)** – Boundaries that segment the country for telecommunication licensing purposes. MTAs are based on Rand McNally's Commercial Atlas & Marketing Guide. Each MTA is named after one or more cities which are designated as Major Trading Centers. The FCC uses MTA boundaries for licensing services such as Personal Communications Services (PCS).

**FCC** – Federal Communications Commission

**InterMTA** – All wireless to wireline calls, which originate in one MTA and terminate in another MTA. For purposes of this report, as described above, we based the MTA on NPA-NXXs.

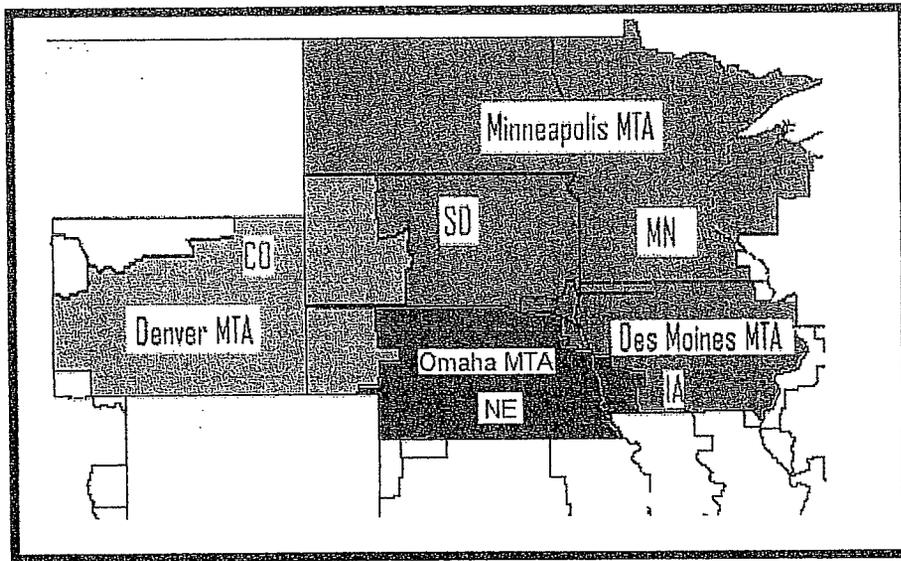
**IntraMTA** – All wireless to wireline calls, which originate and terminate in the same MTA. For purposes of this report, as described above, we based the MTA on NPA-NXXs.

**Intrastate calls** – Calls which originate and terminate within the same state.

**Interstate calls** – Calls which originate in one state, and terminate in another state.

## 4.0 Major Trading Areas (MTAs) for South Dakota

In Figure 4.1, we are showing South Dakota and its neighboring states. As indicated on the map, the Major Trading Areas assigned to this area are Denver (MTA 22), Minneapolis (MTA 12), Des Moines (MTA 32) and Omaha (MTA 45).



**Figure 4.1 Major Trading Areas (MTAs) for South Dakota**

As explained in section 3.0, the purpose of this study is to analyze the traffic of calls that terminate to one of the Venture customers, yet originated in another MTA. In the center of this map is South Dakota. South Dakota has three MTAs that stretch across its boundaries.

As we look at the map, it should be noted that South Dakota has a high amount of MTAs within its boundaries in comparison to the other states within the 51 Major Trading Areas.

## 5.0 Testing Methodology

### 5.1 Gathering the CDR call data

The following files were sent to Vantage Point from [REDACTED] via email.

MTA\_CDR\_extract\_031505\_2nd\_run\_1.zip  
 MTA\_CDR\_extract\_031505\_2nd\_run\_2.zip  
 MTA\_CDR\_extract\_031505\_2nd\_run\_3.zip  
 MTA\_CDR\_extract\_031505\_2nd\_run\_4.zip

### 5.2 Data Processing

We extract the received files and then import the data into a Microsoft SQL Server 2000 database with the help of a SQL Data Transformation Services (DTS) package.

The data from the CDR files were placed in a database which contains the following columns.

	<u>Name</u>	<u>Type</u>	<u>Length</u>	
1	called_num	char	17	1
0	dialed_num	char	17	1
0	billing_num	char	17	1
0	answer_start_datetime	char	20	1
0	answer_stop_datetime	char	20	1
0	duration	numeric	9	1
0	first_cell_site	char	12	1
0	trunk_group	char	12	1
0	trunk_member	char	12	1
0	switch_id	char	12	1
0	mta_number	char	12	1
0	state	char	12	1
0	called_num_npa_nxx	char	17	1

Each column in the file indicates information needed in the analysis such as 'Called\_Num\_NPA\_NXX', 'MTA\_Number', and 'State'.

## 6.0 Venture NPA-NXX Index

Below is a list of the Venture NPA-NXXs incorporated in this study, which is grouped according to the MTA of the NPA-NXX.

**Venture Minneapolis MTA NPA-NXXs**

OCN	NPA	NXX	RATE CENTER	STATE	LATA	SWITCH
1680	605	258	ONIDA	SD	640	ONIDSDXCDS0
1680	605	264	ONIDA	SD	640	ONIDSDXCDS0
1680	605	266	HITCHCOCK	SD	640	HTCHSDXADS1
1680	605	285	BOWDLE	SD	640	BWDLSDXARS3
1680	605	287	ROSCOE	SD	640	ROSCSDXARS3
1680	605	325	PIERPONT	SD	640	BRTNSDXADS0
1680	605	436	SENECA	SD	640	SENCSDXARS0
1680	605	442	TOLSTOY	SD	640	TLSTSDXADS0
1680	605	447	ONAKA	SD	640	TLSTSDXADS0
1680	605	448	BRITTON	SD	640	BRTNSDXADS0
1680	605	458	WESSINGTON	SD	640	WSTNSDXADS1
1680	605	486	ROSLYN	SD	640	RSLNSDXADS0
1680	605	493	LANGFORD	SD	640	BRTNSDXADS0
1680	605	537	ROSHOLT	SD	640	SSTNSDCODS0
1680	605	539	WESIGTNSPG	SD	640	WSSPSDXADS0
1680	605	596	TULARE	SD	640	TULRSDXADS0
1680	605	649	SELBY	SD	640	SLBYSDXADS0
1680	605	698	SISSETON	SD	640	SSTNSDCODS0
1680	605	742	SISSETON	SD	640	SSTNSDCODS0
1680	605	765	GETTYSBURG	SD	640	GTBGSDXADS0
1680	605	768	LEBANON	SD	640	GTBGSDXADS0
1680	605	852	HIGHMORE	SD	640	HGHMSDXADS0
1680	605	875	HARROLD	SD	640	HGHMSDXADS0
1680	605	943	REEHEIGHTS	SD	640	REHGSDXADS0
1680	605	948	HOVEN	SD	640	HOVNSDXADS0
1680	605	962	BLUNT	SD	640	BLNTSDXADS0
1680	605	973	ONIDA	SD	640	ONIDSDXCDS0
1680	701	443	NO BRITTON	ND	640	BRTNSDXADS0

APPENDIX A

09/28/04 - Email 

Confidential Email Between the Parties