



# Reconciliation – A basis for Interconnect Settlements

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## Executive Summary

This white paper describes the concept of reconciliation of telecom traffic for Interconnect settlements. It explains Terminating Partners, Originators and Incumbent Operators in detail. It states the concept of interconnect within the country and at international level. It also gives sample Network Diagram for interconnect.

White paper defines different types of traffic a telecom operator has. Each telecom operator is expected to have a billing system but the values generated by the billing system always vary to some extent.

This white paper discusses in detail the process of reconciliation with different interconnect partners. It discusses different levels of reconciliation which can go from must matching the 'totals' to going down to matching each and every call detail. It discusses different types of differences there can be while matching records on two sides.

At the end it discusses reasons for differences on two sides and then also discusses industry standards for disputes arising out of those differences. It specially discusses the process of reconciliation from a billing perspective.

## Introduction

When a Telecom operator interconnects with another Telecom operator for sending or receiving different types of traffic then CDRs (Call Detail Records) are generated at both the ends. These CDRs need to be reconciled periodically to find out errors if any.

A Telecom Vendor who finally receives data (calls or SMS) from telecom operators is known as *Terminating Partner* and a Telecom Operator who sends data (calls or SMS) to any other operator is known as *Originating Partner*.

In addition to that, an operator can also be in *Transit Mode* i.e. it receives data (calls or SMS) from one operator and delivers it (as it is) to any other operator. Mostly, data is send/received between two specific operators and not all the operators can transmit data to different destinations. To transfer data (calls or SMS) to various destinations, general purpose carriers are used that sends data according to the destination prefixes. For Example: One operator takes all of the Europe's traffic but is restricted to LAN (Local Area Network) lines only and there can be another operator who has an interconnect with the mobile operators. The operator may have a separate interconnect agreement with another operator that is transmitting traffic to North America.

## Types of Traffic

A Telecom operator sends/receives different types of traffic (SMS, different types of data and content etc.) to other operators. The most common type of traffic is the voice traffic in which an individual phone call is established.

## Rating

Interconnect partners provides a rate sheet for each type of service in which different types of rates are mentioned for different charging policies. For voice calls, usually it is the destination or the terminating point that is the base for charging. The billing system charges the service according to the charging policies. When a call is sent or received, a separate CDR is generated at both the ends (originating and terminating end) and rates are applied to that specific CDR. The process of reconciliation involves comparing the rates applied at both the ends.

## Reasons for Differences

On comparison, CDRs may differ and there can be different reasons for that. Most common reason is that the call initiated at one end is not there at the other and vice-versa.

Another reason for the difference is the duration of calls. It is quite possible that some call duration is recorded as thirty seconds (30 seconds) at one end and three hundred seconds (300 seconds) at the other end.

One more reason for the difference can be rating policies. A call at both the ends can be rated according to different rating plan that causes differences between the two CDRs (generated separately at both the ends).

Rounding policy used at both the ends can also be the reason for the difference in the CDRs. At one end, rounding can be on permanent basis while on the other end it can be on 6/6 basis.

It is also possible that both the operators are considering a single destination in two separate zones. For Example: The destination 44717 may be considered as a LAN line number at one

end and a Mobile number at the other. This can also cause difference in the CDRs by giving totally different rates to the same destination.

Sometimes it is difficult to view a single call level and at that time the reconciliation is based on different summaries. If there are not many differences between the summaries then there is no need to drill down. If there are lots of differences between the summaries then the billing system should be capable enough to drill down till a single call or SMS or service providing level to eliminate the differences and show the revenue at both ends.

## Time Differences

As CDRs are generated according to the local time therefore the reconciliation engine takes care of such time differences on different switches (deployed by the operators) to compare time variation in CDRs.

Reconciliation system should also be capable of generating required reports for different disputes (if any).

## Summary

When a Telecom operator interconnects with another Telecom operator for sending or receiving different types of traffic then CDRs (Call Detail Records) are generated at both the ends. These CDRs need to be reconciled periodically to find out errors if any.

Reconciliation system should be capable of generating required reports for different disputes (if any).

AdvOSS.com offers a comprehensive Reconciliation Solution. For more details, please visit <http://www.AdvOSS.com>

## Contact Information

In case of any ambiguity regarding the concept, explained in the whitepaper, please feel free to contact us at [support@AdvOSS.com](mailto:support@AdvOSS.com) or please, visit [http://www.AdvOSS.com/voip\\_contact.html](http://www.AdvOSS.com/voip_contact.html)

For further information please, visit [www.AdvOSS.com](http://www.AdvOSS.com)

## We welcome your suggestions

Thank You for reading this whitepaper. We will be pleased to receive your response and suggestions.