



Siebel RTD

Siebel Decision Center User Guide

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Siebel Decision Center User Guide

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Preface

Siebel Decision Center is a tool used to analyze and adjust deployed Inline Services. The target user of Decision Center is business analyst who can benefit from structured presentation of analyzed data.

This guide gives an overview of the information presented by Decision Center and the means for adjusting and redeploying Inline Services.

About this document

This document acts as a reference to Siebel Decision Center. It identifies the processes by which information can be viewed and Inline Services adjusted using Decision Center.

Intended Audience

This document is designed to act as a reference for business users of Decision Center. Users should have a working knowledge using browser based applications.

How to use this guide

This document is divided into the following sections: **Section 1: About Siebel Decision Center** gives an overview of the application; **Section 2: About Modifying and Redeploying and Inline Service** outlines the changes that can be made to a deployed Inline Service.

Document conventions

Convention	Description
<code>monospace</code>	Indicates source code and program output.
bold	Indicates portions of the user interface, including labels, tabs, menus, etc.
<i>italic</i>	Italics are used to highlight the first use of terms.
'quote'	Indicates input required from the user.
	Indicates additional information that may make the task easier.
	Indicates additional information about the subject.
	Indicates actions that may result in loss of data or errors.

Section 1: About Siebel Decision Center

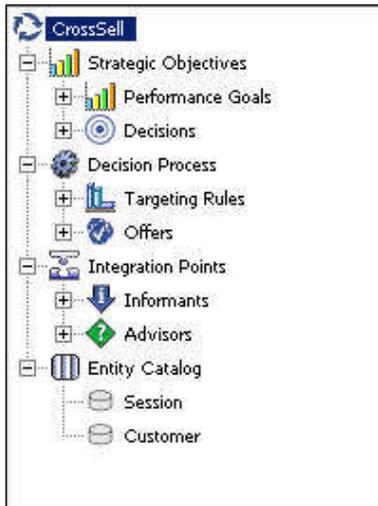
Siebel Decision Center is a thin client tool for business users to explore, modify and examine the structure and data gathered by a deployed Inline Service. Decision Center provides a number of reports and editors to allow users to make changes to the Inline Service and re-deploy it to the Siebel Real-Time Decision Server.

1.1 Navigating in Siebel Decision Center

Decision Center offers three mean of navigation: The toolbar, the Inline Service Navigator and the tabs and subtabs.

1.1.1 About the Inline Service Navigator

The left pane of Decision Center is the Inline Service Navigator, a tree structure showing the elements that comprise the Inline Service.



Clicking on any element in the Inline Service Navigator will bring the corresponding reports for that element into the right hand viewing pane.

The application shown here is a cross selling example that is included with Siebel RTD. Ask your system administrator to deploy this example to help you to explore Decision Center.

The Cross Sell Inline Service example is a simple implementation for a credit card contact center. As calls come into the center, information about the customer and the channel of the contact is captured.

Based on what we know of this customer, a cross selling offer is selected that is extended to the customer. The success or failure of that offer is tracked and sent back to the server so that the underlying decision model has the feedback that helps to refine its ability to make a better cross selling recommendation.

We will use the Cross Sell example to explore the reports in Decision Center.

1.2 About Decision Center reports

Each element in the Inline Service Navigator represents a portion of the running Inline Service. Each of these elements gathers and displays useful information for analysis. Decision Center includes an extensive set of reports that let users explore all the aspects of the learning and statistics to any desired depth. This information can also be exported to other BI systems for further use in analysis. This allows individuals to understand how Sigma Dynamics works and to verify its analysis.

The reports shown here are included with the Cross Sell example Inline Service. Your Inline Service reports may be customized and appear slightly different.

1.2.1 About Application reports

The application element in the Inline Service Explorer is identified by your Inline Service name: 

Reports at the application level are:

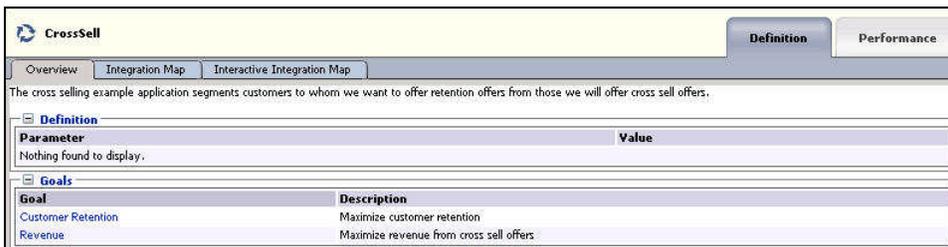
Definition

- Overview
- Integration Map

Performance

- Trends
- Alerts

Application Definition Overview



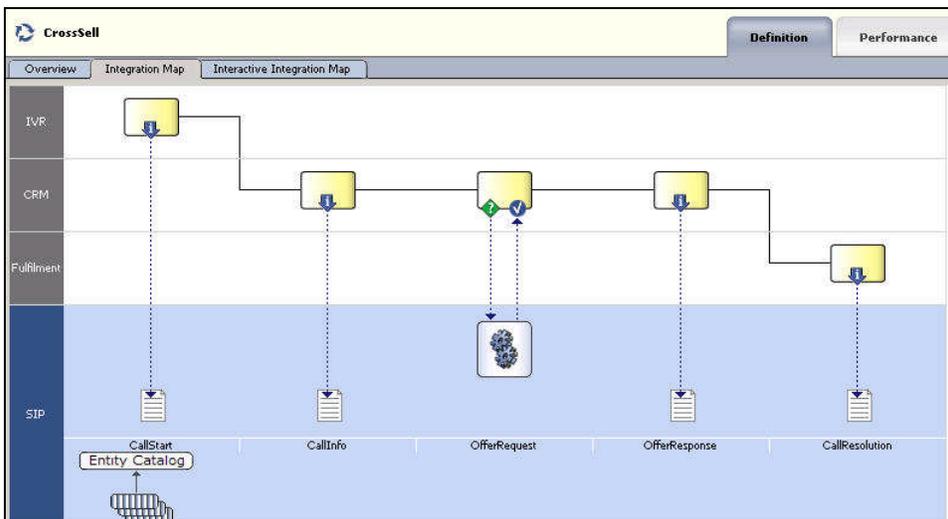
Parameter	Value
Nothing found to display.	

Goal	Description
Customer Retention	Maximize customer retention
Revenue	Maximize revenue from cross sell offers

The Application Definition Overview gives general information about the Inline service including:

- Description: A description of the Inline Service
- Definition: any application parameters that are used by the Inline Service.
- Goals: the business goals that the Inline Service supports.

Application Definition Integration Map

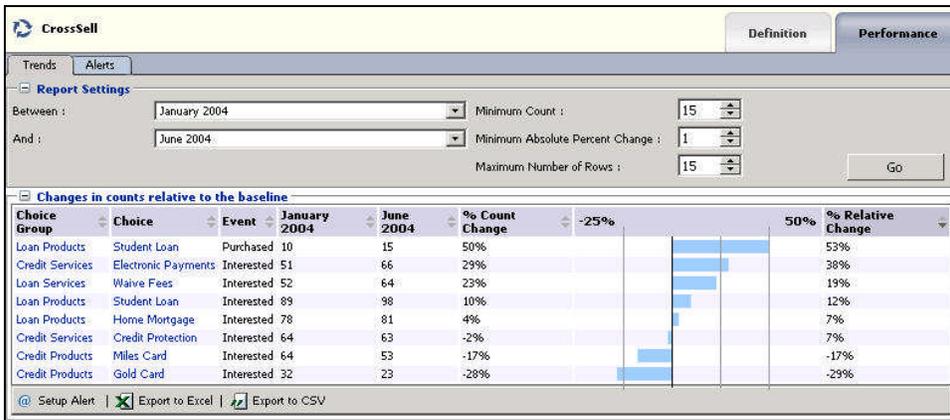


The Application Definition Integration Map gives a swim lane view of the overall Inline Service. Each enterprise operational system that the Inline Service integrates to is shown as a swim lane, with the name along the left hand side. Integration Points are represented along the blue swim lane. There are two types of Integration Points: Informants and Advisors.

Informants are collectors of information and events from the various operational systems; they show data flowing in one direction towards the Inline Service. For instance, the CallStart Informant show above is collecting data about an incoming call from the IVR.

Advisors provide advice back to the operational systems at the request of that system; they show data flowing both to the Inline Service (making a request for advice) and back to the operational system with the advice. For instance, the OfferRequest Advisor shows a request coming into the Inline Service for a cross selling offer, and the advice for cross sell being returned to the CRM system.

Application Performance Trends



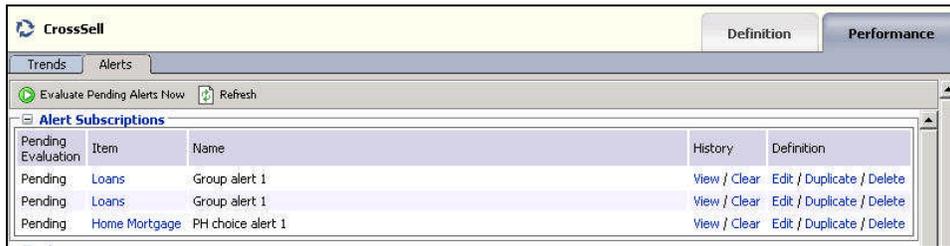
Application Performance Trends show the relative percentage of change in the number of offers extended across all models in the Inline Service for a particular time period. Each offer (Choice column) is shown for each event that occurred during the time period.

In this example the purchase of a student loan cross sell offer has increased 50% between January, 2004 and June, 2004. The percent relative change is 53%.

The percent relative change is the amount of change from time period to time period as it is compared against a baseline. In the Cross Sell example, the baseline is when an offer is made. We compare another event, such as interest in the offer, to the amount of times an offer was made for the time period. Then we compare it in the next time period. If the percent against the baseline is higher or lower than expected, as compared to the first time period, the percent relative change may go up or down.

There are four events recorded by the Inline Service about the cross sell offers: Extended, Interested, Purchased and Delivered. Extended is the baseline event.

Application Performance Alerts



Pending Evaluation	Item	Name	History	Definition
Pending	Loans	Group alert 1	View / Clear	Edit / Duplicate / Delete
Pending	Loans	Group alert 1	View / Clear	Edit / Duplicate / Delete
Pending	Home Mortgage	PH choice alert 1	View / Clear	Edit / Duplicate / Delete

The Application Performance Alerts report shows all the Alerts that are set for the Inline Service. Many reports with in Decision Center come equipped with the ability to set Alerts. To create an Alert, *Setting Alerts* later in this document.

There are three parts to an Alert:

- Message: the customizable message that will be sent with the alert.
- Condition: the condition that must be met for the Alert to be sent.
- Delivery options: where and how the Alert message is delivered.

1.2.2 About Strategic Objectives reports

Strategic Objectives reports are identified under a branch titled 'Strategic Objectives' in the Inline Service Navigator.



Strategic Objectives Reports are:

Performance Goals

- Definition Overview
- And, for each Performance Goal
 - Definition Overview

Decision

- Definition Overview
- And, for each Decision
 - Definition Overview
 - Definition Priorities

Performance Goal Definition Overview

Performance Goals		Definition
Overview		
<input checked="" type="checkbox"/>	Customer Retention	Maximize customer retention
<input checked="" type="checkbox"/>	Revenue	Maximize revenue from cross sell offers

The Performance Goal Definition Overview report shows all organizational performance goals that the decision making process has been optimized for. In this example the advice given by the Inline Service is optimized to both maximize customer retention and to maximize revenue.

Performance Goal Definition Overview for each performance goal

Customer Retention		Definition
Overview		
<input checked="" type="checkbox"/> Definition		
Settings	Values	
Description	Maximize customer retention	
Required	true	
Normalization Factor	1	
Optimize For	maximize	

Each performance goal also has a Performance Goal Definition Overview report. This shows the detail of each performance goal, including whether it is required, a normalization factor and which direction in which to optimize.



Note: If you have more than one performance metric, and they use different units, a Normalization Factor has been set to normalize the values. For instance, if you had another metric "Minimize hold time" measured in seconds, the normalization factor would be how many minimized seconds are worth a dollar (revenue) to your organization.

Decision Definition Overview

Decisions				Definition
Overview				
Decisions	Customer Retention	Revenue	Description	
OfferDecision	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	The OfferDecision decides on the offer to suggest to the customer. Offers that support the customer retention performance metric will be more heavily weighted for the segment of the population that is eligible for retention.	

The Decision Definition Overview shows all Decisions that are part of the Inline Service. There is one Decision here called 'OfferDecision'. A Decision is used by an Advisor to determine eligible Choices, score those Choices dynamically, weight the scoring according to segments of the population, and present to best-fit choice. The Choice that a Decision chooses is the advice that is given to a requesting operational system, such as the CRM system in our example.

Each Decision shows a description and the Performance Goals that the Decision optimizes for.

Decision Definition Overview for each Decision

The screenshot shows the 'OfferDecision' interface with the 'Definition' tab selected. It includes an 'Overview' section with a description: 'The OfferDecision decides on the offer to suggest to the customer. Offers that support the customer retention performance metric will be more heavily weighted for the segment of the population that is eligible for retention.' Below this is a table showing the choice groups selected by the decision.

Choice Group	Description
Offers	Offers to customers for cross selling and retention.

Each Decision shows a detail Definition Overview. The OfferDecision shows a description:

The OfferDecision decides on the offer to suggest to the customer. Offers that support the customer retention performance metric will be more heavily weighted for the segment of the population that is eligible for retention.

It also shows the number of Choices (advice) returned and which Choice Group it picks from.

Decision Definition Priorities for each Decision

The screenshot shows the 'OfferDecision' interface with the 'Priorities' tab selected. It displays a table for defining selection functions for different segments. The 'Segment to Retain' segment is configured to prioritize 'Customer Retention' at 70% and 'Revenue' at 30%. The 'otherwise' segment is configured to prioritize 'Customer Retention' at 30% and 'Revenue' at 70%.

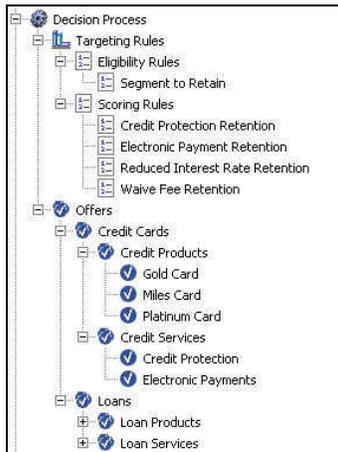
Segments	Selection Function
Segment to Retain	Customer Retention: 70% Revenue: 30%
otherwise	Customer Retention: 30% Revenue: 70%

Each Decision can optimize the different performance goals for different segments of the population. For instance, in our example we have segmented a group of customers that it is important to retain. You can see that the 'Customer Retention' performance goal is heavily weighted for this segment of population.

For the remaining population, we choose to weight our 'Maximize Revenue' performance goal more heavily.

For information on segmenting population, see *Using Filtering Rules to Segment Population* later in this document.

1.2.3 **About Decision Process reports**



Decision Process reports are identified under a branch titled 'Decision Process' in the Inline Service Navigator. The following types of reports are available:

Targeting Rules

- Definition Overview (Filtering Rule)
- Definition Overview (Scoring Rule)

Choice Group Definition

- Definition Overview
- Definition Group Eligibility
- Definition Choice Eligibility

Choice Group Performance

- Performance Counts
- Performance History
- Performance Alerts

Choice Group Analysis

- Analysis Drivers
- Analysis Trends

Choices and Choice Groups are hierarchical. Choice Groups are useful for organizing choices. Choice Groups can be used in one of two ways: they provide a way to organize the observations that are collected and analyzed; they are also a way to organize the feedback we will give to the business process through the Advisor Integration Points.

In addition to the reports available at the Choice Group level, Choices have the following report:

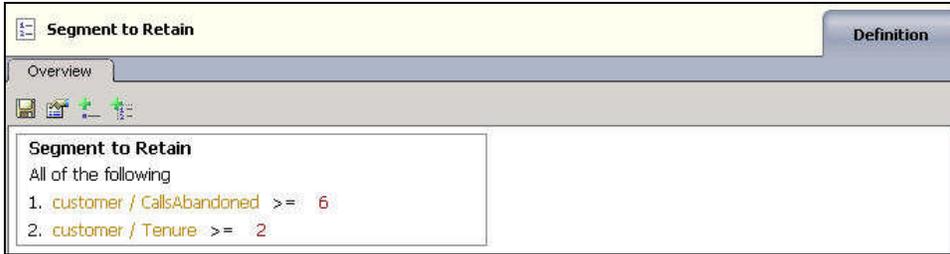
Choice Performance

- Performance History

Choice Analysis

- Analysis Best Fit

Filtering Rule Definition Overview



Filtering Rule Definition Overview is a graphical representation of rules defined in the Inline Service. This example defines the segment of population we want to retain. If the number of calls abandoned by this customer is greater than or equal to six, and the customer tenure is greater than or equal to 2 years, we choose to weight the 'Customer Retention' performance goal more heavily.

Scoring Rules can be used for assigning scores to possible Choices (i.e. Offers in our example).

<p>If</p> <p>All of the following</p> <ol style="list-style-type: none"> 1. session / customer / CreditLineAmount > 0 2. session / customer / CreditLineAmount <= 50000 	<p>Then</p> <p>7.0</p>
<p>If</p> <p>All of the following</p> <ol style="list-style-type: none"> 1. session / customer / CreditLineAmount > 50000 2. session / customer / CreditLineAmount <= 60000 	<p>Then</p> <p>6.0</p>
<p>If</p> <p>All of the following</p> <ol style="list-style-type: none"> 1. session / customer / CreditLineAmount > 60000 2. session / customer / CreditLineAmount <= 70000 	<p>Then</p> <p>5.0</p>
<p>If</p> <p>All of the following</p> <ol style="list-style-type: none"> 1. session / customer / CreditLineAmount > 70000 2. session / customer / CreditLineAmount <= 80000 	<p>Then</p> <p>4.0</p>
<p>Otherwise...</p>	<p>The value is:</p> <p>3</p>

For instance, this rule assigns a different score according to the level of the customer's credit line amount.

For more about creating new rules, see *About Rules* later in this document.

Choice/Choice Group Definition Overview

Choices are always a part of a Choice Group that is used to organize Choices. In this example the Choice 'Gold Card' is part of the Choice Group 'Credits Cards'.

Choice Group

Credit card products and services.

Summary of Credit Cards

Name	Description
Credit Products	Credit products.
Credit Services	

Choice

Offer to get a Gold card.

Targeting Attributes

Attribute	Default Value (Inherited From)	Value
Profit Margin	0.5 (Offers)	25.0
Likelihood of Purchase	Predicted (Offers)	

Presentation Attributes

Attribute	Default Value (Inherited From)	Value
Message	"" (Offers)	"The Gold Credit Card provides extra services, plus a preferential rate of interest on your borrowings."

Scoring Attributes

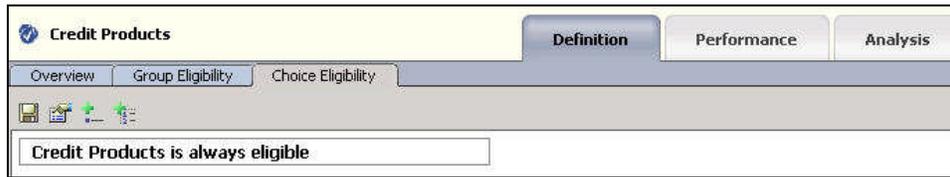
Performance Goal	Default Score (Inherited From)	Score
Customer Retention	1 (Credit Products)	
Revenue	Likelihood of Purchase multiplied by Profit Margin (Credit Products)	

The Definition Overview for Choice Groups summarizes what the Choice Group is made up of. In this case, 'Credit Cards' contains two Choice Groups: 'Credit Products' and 'Credit Services'. Groups that contain other groups and choices are arranged in a nested manner in the Inline Service Navigator.



The Definition Overview for Choices describes the different attributes of the Choice and the default values. Default values are important because if the decision framework is somehow unavailable, or does not respond in a predefined timeframe, the default values will be assigned to the Choice. These Choice attributes are organized into different Categories, in this case: Targeting attributes, Presentation attributes and Scoring attributes.

Choice Definition Eligibility



Both Choices and Choice Groups can use rules to define if they are eligible to participate in the Decision. In this example, the Credit Product' Group is always eligible for any Decision that uses it. Filtering rules on Choices and Choice Groups are additive. So, if a child of this Choice Group (for instance 'Gold Card') has an Filtering rule, it is executed after this Rule is executed.

Choice Performance Counts

The Choice Performance Counts report shows how each individual Choice is performing within the system. The Choice Group reports are rollups of the Choices contained in the group. The Choice Performance Count report allows you to set a timeframe for the data reported.

Choice Group

At the Choice Group level, counts for all the contained Choices and Outcomes are displayed.

The screenshot shows the 'Performance' tab of the 'Credit Products' interface. The 'Report Settings' section is configured with 'Time Window : Since Apr 1, 2003', 'Maximum Number of Rows : 10', and 'channel : All'. The main table, titled 'Distribution of Credit Products', displays the following data:

Credit Products	Outcome	Count	%
Gold Card	Delivered	6517	100%
	Interested	193	3%
	Purchased	27	0%
Miles Card	Delivered	6367	100%
	Interested	433	7%
	Purchased	58	1%
Platinum Card	Delivered	6476	100%
	Interested	289	4%
	Purchased	48	1%

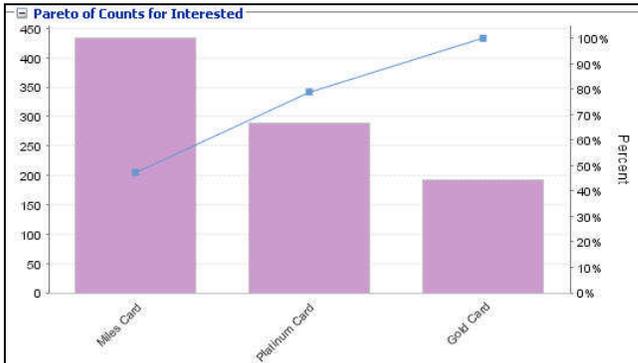
The first part of the report shows the distribution of the out comes. In this example, for the 'Miles Card' 100% of the Choices that were given as advice to the CRM system were delivered to the customer. Of those customers, 7% showed interest and 1% accepted the offer.

The numbers of offers made are shown under the Count column. Totals are shown in the next section.

The screenshot shows the 'Total Counts' section of the report, which summarizes the data from the previous table:

Outcome	Count	%
Delivered	19360	100%
Interested	915	5%
Purchased	133	1%

Additionally, a pareto chart is shown for the Choices for each of the outcomes. A pareto chart is used to graphically summarize and display the relative importance of the differences between groups of data.



Choice

At the Choice level, counts for the individual choice are given for the time period chosen.

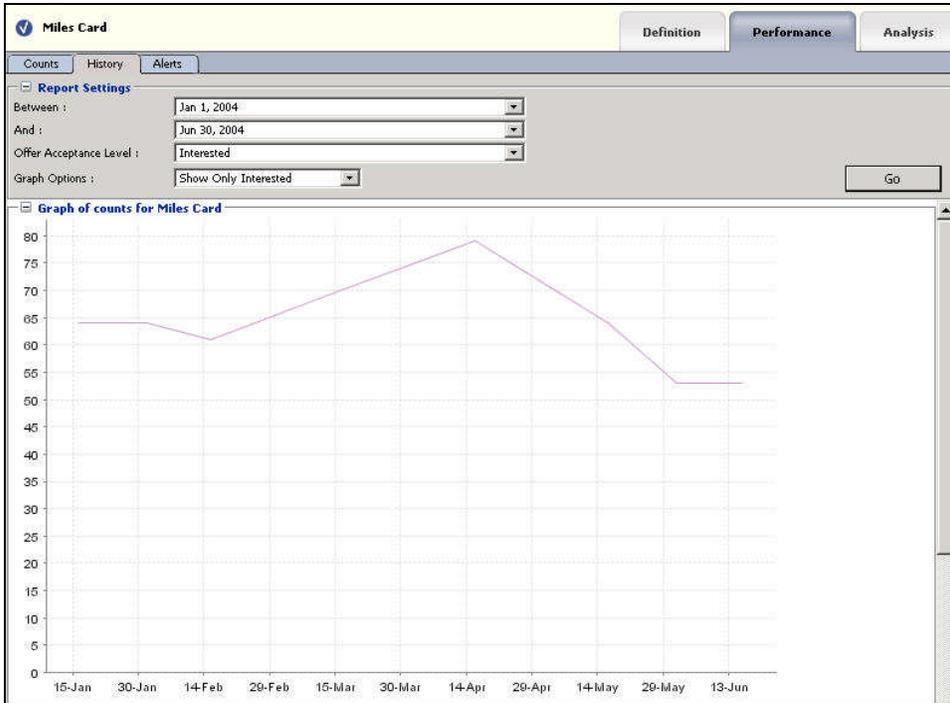
The screenshot shows the "Miles Card" report interface. The "Performance" tab is active. The "Report Settings" section shows "Time Window" set to "March 2004" and "channel" set to "All". Below this is a "Counts" table showing outcomes for the Miles Card.

Credit Products	Outcome	Count	%
Miles Card	Delivered	934	100%
	Interested	70	7%
	Purchased	10	1%

At the bottom of the interface, there are options for "Setup Alert", "Export to Excel", and "Export to CSV".

Choice Performance History

At the Choice level, a historical report of the counts of a Choice changing over time is available. The graph shows the outcome of a particular choice over the time period selected.

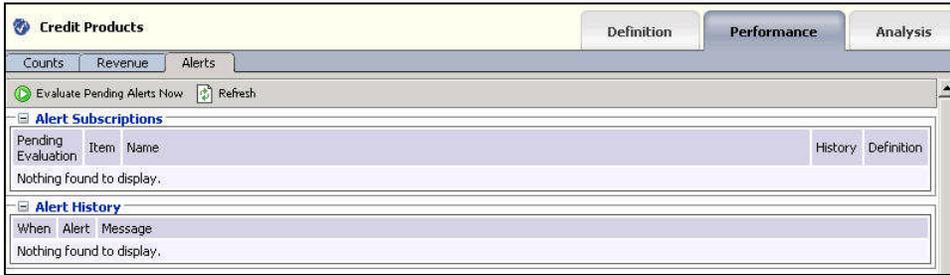


The detailed data is available below the graph.

When	Outcome	Count
June 2004	Interested	53
June 2004	Delivered	890
May 2004	Interested	64
May 2004	Delivered	978
April 2004	Interested	79
April 2004	Delivered	895
March 2004	Interested	70
March 2004	Delivered	934
February 2004	Interested	61
February 2004	Delivered	886
January 2004	Interested	64
January 2004	Delivered	888

Setup Alert | Export to Excel | Export to CSV

Choice Performance Alerts

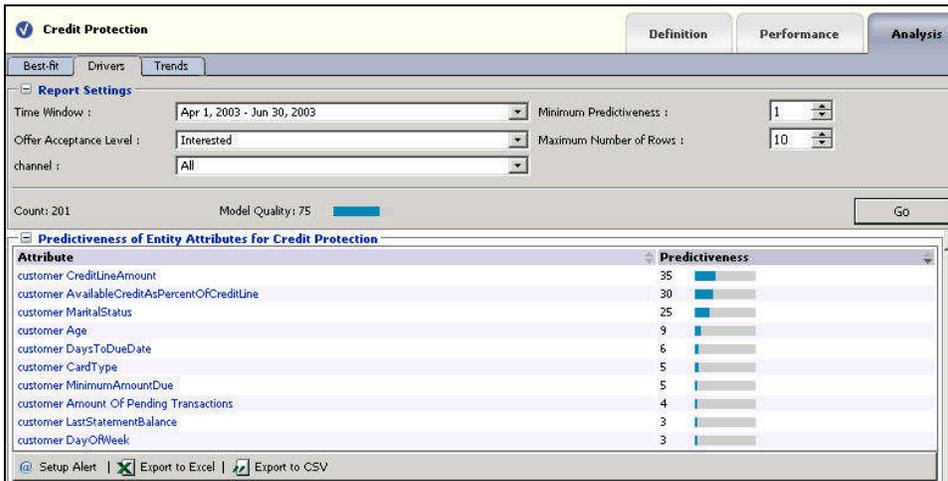


The Choice Performance Alerts report shows all the Alerts that are set for the Choice. Many reports within Decision Center come equipped with the ability to set Alerts. To create an Alert, see *Setting Alerts* later in this document.

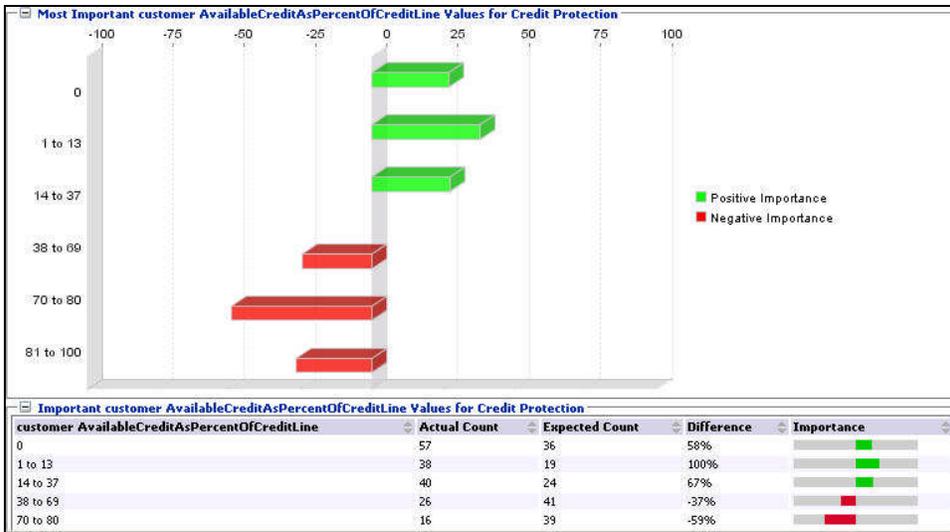
There are three parts to an Alert:

- Message: the customizable message that will be sent with the alert.
- Condition: the condition that must be met for the Alert to be sent.
- Delivery options: where and how the Alert message is delivered.

Choice Analysis Drivers

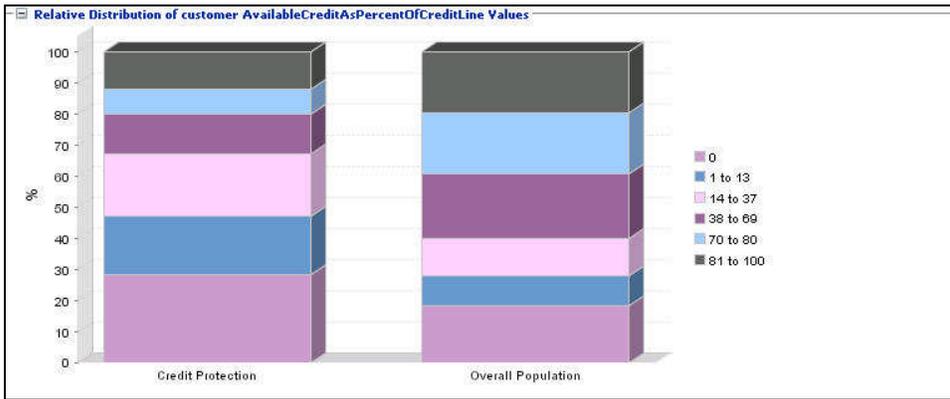


The Choice Analysis Drivers report identifies the attributes that are influential as drivers of predictiveness for each of the offers. The outcome and timeframe can be adjusted at the top of the report. In this example, both credit line amount and available credit as a percent of credit line are very predictive that the customer is interested in a cross sell offer for credit protection. By clicking on the attribute, you can see the positive or negative predictiveness of the attributes.

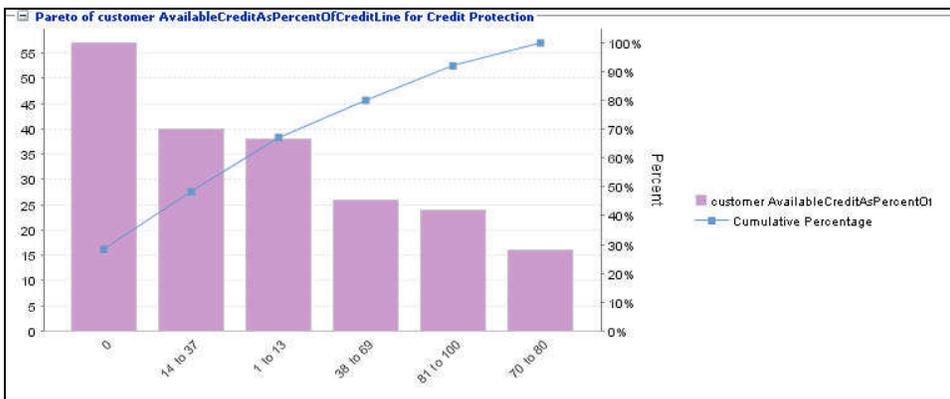


You can see from the graph and data that the higher the percentage of available credit, the less likely the customer is to be interested in a cross sell offer for credit protection.

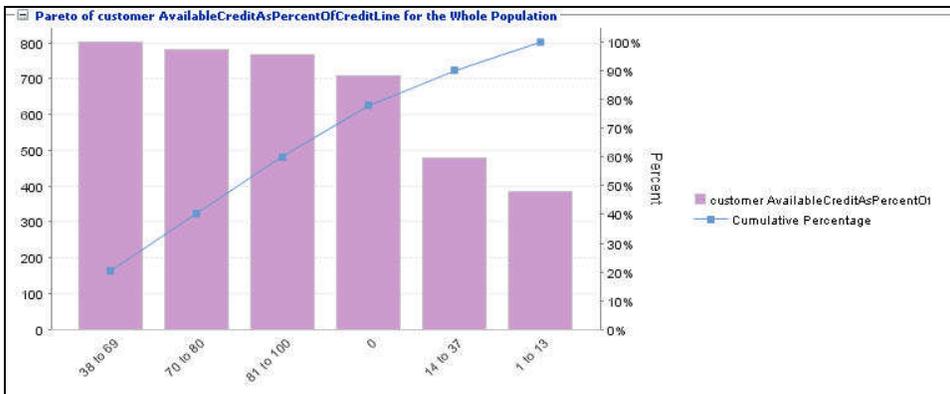
Other graphs are also available.



This graph shows a relative distribution as compared to the overall population.



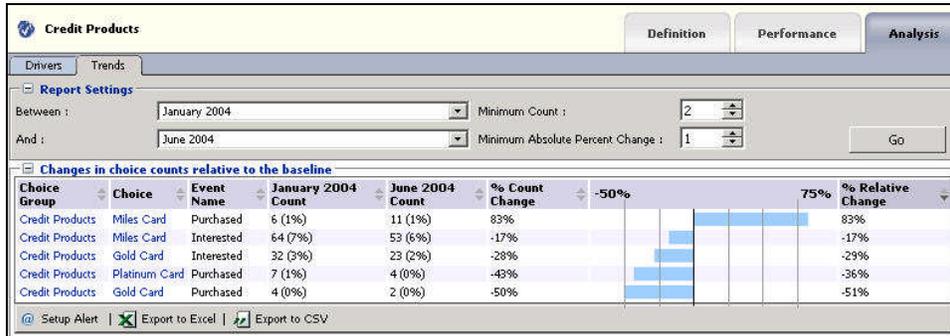
This is a pareto graph of the credit customers.



This is a pareto graph of the entire population.

Choice Analysis Trends

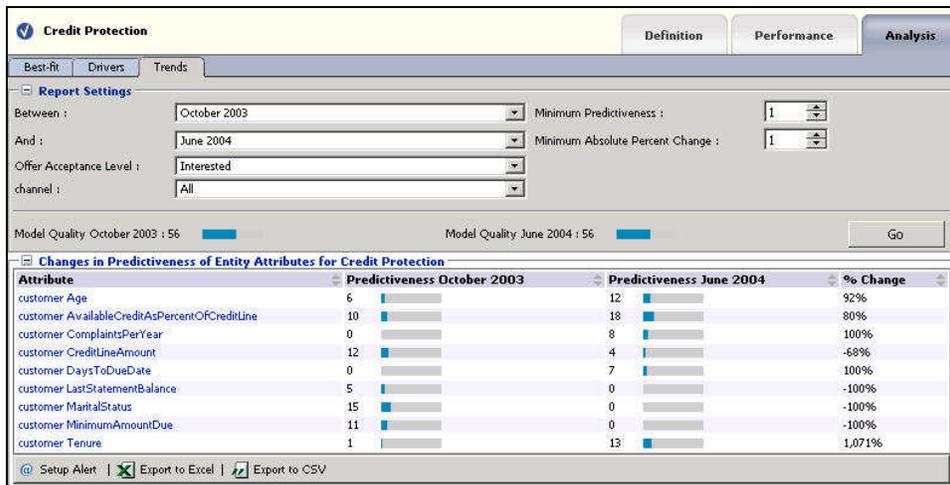
Choice Group



At the Choice Group level the Choice Analysis Trends report shows the change of counts for each of the Choices and outcomes over a period of time. The timeframe can be adjusted at the top of the report.

The percent relative change is the amount of change from time period to time period as it is compared against a baseline. In the Cross Sell example, the baseline is when an offer is made. We compare another event, such as interested, to the amount of times an offer was made for the time period. Then we compare it in the next time period. If the percent against the baseline is higher or lower than expected, as compared to the first time period, the percent relative change may go up or down.

Choice



At the Choice level the Choice Analysis Trends report shows the change of predictiveness for each of the Choices and attributes over a period of time. The timeframe can be adjusted at the top of the report. If you have multiple channels, you can see the predictiveness across each channel independently.

As you can see from the report, some attributes become more predictive over the time period and some less so.

Choice Analysis Best Fit

The screenshot shows the 'Credit Protection' report in the 'Analysis' tab. The 'Report Settings' section includes:

- Time Window: Since Apr 1, 2003
- Offer Acceptance Level: Interested
- channel: All
- Maximum Number of Rows: 10
- Count: 638
- Model Quality: 84

 The main table, titled 'Highest correlating attribute values for Credit Protection', lists attributes and their values with corresponding correlation bars:

Attribute	Value	Correlation
customer CreditLineAmount	6000	High
customer MaritalStatus	Divorced	High
customer AvailableCreditAsPercentOfCreditLine	20 to 22	High
customer Age	41	High
customer MinimumAmountDue	51 to 100	Medium
customer DaysToDueDate	7	Medium
customer Amount Of Pending Transactions	1801 to 2300	Medium
customer CallReason	Use of card for internet payments	Low
customer CallsLast6Months	1	Low
customer Occupation	Professional	Low

At the Choice level the Choice Analysis Best Fit report shows all of the attributes and hypothetical values that allow the most to most likely predict the outcome that is specified.

For this example the attributes and values:

- customer CreditLineAmount - 6000
- customer MaritalStatus - Divorced
- customer AvailableCreditAsPercentOfCreditLine - 20 to 22

have the highest correlation to a customer being Interested in the product 'Credit Protection'. The best fit report gives you a snapshot of the most predictive behavior for this cross sell offer.

1.2.4 About Entity Catalog reports

Entity Catalog reports are identified under a branch titled 'Entity Catalog' in the Inline Service Navigator.



Entity Definition Overview

Customer			
		Definition	Analysis
Overview			
Entity Attributes			
Attribute	Type	Description	
Age	integer	The age of the customer	
Amount Of Pending Transactions	double	Amount of money in transactions incurred after the closing of the previous cycle	
AvailableCreditAsPercentOfCreditLine	double	Percentage of credit available.	
CallReason	string	Reason that the customer called.	
CallsAbandoned	integer	Number of calls abandoned in last 60 days.	
CallsLast6Months	integer	Number of calls in the last 6 months.	
CardType	string	Type of card.	
ComplaintsPerYear	integer	Number of complaints from all channels per year.	
CreditLineAmount	integer	Amount of the credit line.	
customerId	integer		
DayOfWeek	string	Day	
DaysToDueDate	integer	Number of days until balance is due.	
HasCreditProtection	string	Does customer have credit protection?	
Language	string	Preferred language.	
LastStatementBalance	double	Amount of balance on last statement.	
MaritalStatus	string	Marital status.	
MinimumAmountDue	double	Minimum amount due on last statement.	
NumberOfChildren	integer	Number of children.	
Occupation	string	Occupation of the customer.	
SignedUpForEpay	string	Is customer using electronic payment?	
Tenure	double	Number of months the customer has been with us.	

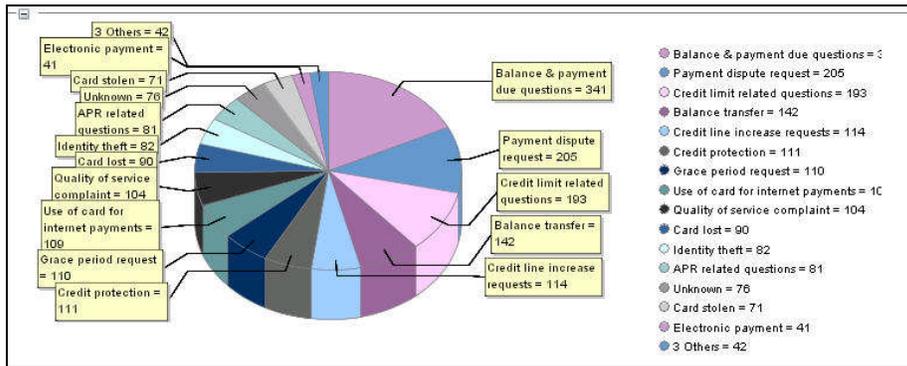
The Definition Overview for Entity describes the all of the attributes for the Entity.

Entity Analysis Counts

The Entity Analysis Counts shows the total count of how many times a particular attribute has been part of a transaction in the Inline Service. The Entity Analysis Count report allows you to set a timeframe and choose an attribute for the data reported.

Customer			
		Definition	Analysis
Counts			
Statistics			
Drivers			
Trends			
Alerts			
Report Settings			
Time Window :	Nov 4, 2003 - Nov 10, 2003		
Attribute :	customer CallReason	Go	
Counts for values of Customer			
Values of customer CallReason	Count	%	
Balance transfer	142	7%	
Credit limit related questions	193	10%	
Card lost	90	5%	
Credit line increase requests	114	6%	
Card stolen	71	4%	
APR related questions	81	4%	
Payment dispute request	205	11%	
Credit protection	111	6%	
Balance & payment due questions	341	18%	
Electronic payment	41	2%	
Use of card for internet payments	109	6%	
Unknown	76	4%	
Identity theft	82	4%	
Quality of service complaint	104	5%	
Grace period request	110	6%	
Payment processing questions	33	2%	
Rewards related questions	7	0%	
Computation of min amount due questions	2	0%	

Additionally a pie chart is provided.



This example shows the distribution of the reason for calls into the call center.

Entity Analysis Statistics

Customer						
					Definition	Analysis
Counts Statistics Drivers Trends Alerts						
Report Settings						
Time Window : Dec 23, 2003 - Dec 29, 2003					Go	
Statistics on continuous attributes of Customer						
Name	Minimum	Maximum	Median	Average	Sigma	
customer Age	20	89	48	50.06	16.2	
customer Amount Of Pending Transactions	1	9971	821	1198	1529	
customer AvailableCreditAsPercentOfCreditLine	0	100	50	47.71	34.26	
customer CallsAbandoned	0	10	1	1.354	2.055	
customer CallsLast6Months	0	10	1	1.292	1.995	
customer ComplaintsPerYear	0	11	0	0.4116	1.255	
customer CreditLineAmount	0	49000	3000	3633	5165	
customer DaysToDueDate	0	30	12	13.06	9.476	
customer LastStatementBalance	0	25740	710.9	1428	3374	
customer MinimumAmountDue	0	4996	50.5	264.7	601.5	
customer NumberOfChildren	0	7	1	1.252	1.483	
customer Tenure	0	12	3	3.787	3.036	

The Entity Analysis Statistics reports shows the minimum, maximum, median, average and sigma values for each of the attributes of the entity. For instance, the median age of customers is 48.

Entity Analysis Drivers

The screenshot shows the Siebel Decision Center interface for the 'Customer' entity. It features a 'Report Settings' section with filters for Time Window (Apr 1, 2003 - Jun 30, 2003), Offer Acceptance Level (Interested), channel (All), and Attribute (customer Amount Of Pending Transactions). The main report is titled 'Predictiveness of customer Amount Of Pending Transactions on choices' and displays a table of choices and their predictiveness scores. A second report, 'Importance of specific values of customer Amount Of Pending Transactions', shows the importance of various transaction ranges for different choices.

Choice	Outcome	Predictiveness
Waive Fees	Interested	11
Electronic Payments	Interested	7
Miles Card	Interested	4
Student Loan	Interested	4
Credit Protection	Interested	4
Home Mortgage	Interested	4
Platinum Card	Interested	3

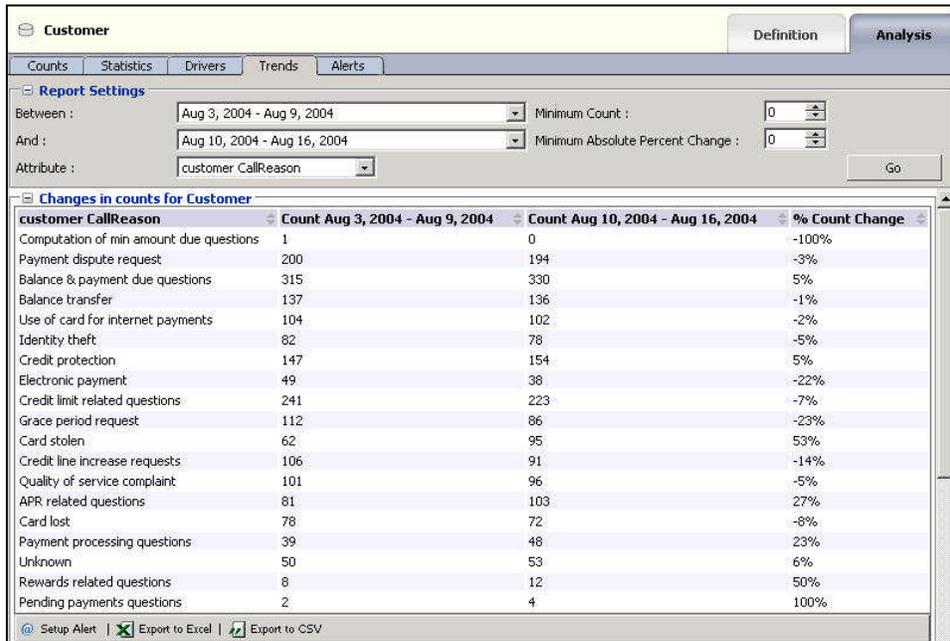
Predictiveness	Event	customer Amount Of Pending Transactions	Importance
Waive Fees	Interested	701 to 800	High
Credit Protection	Interested	1201 to 1900	Medium
Platinum Card	Interested	1 to 300	Low
Miles Card	Interested	601 to 800	Low
Miles Card	Interested	401 to 600	Low
Electronic Payments	Interested	701 to 900	Low
Electronic Payments	Interested	1401 to 9988	Low
Credit Protection	Interested	0 to 400	Low
Platinum Card	Interested	301 to 600	Low
Miles Card	Interested	1201 to 2100	Low
Electronic Payments	Interested	0 to 500	Low
Miles Card	Interested	801 to 1200	Low
Waive Fees	Interested	1001 to 1700	Low
Waive Fees	Interested	1701 to 9988	Low

The Entity Analysis Drivers report identifies the attributes that are influential as drivers of predictiveness for the Entity. The outcome and timeframe can be adjusted at the top of the report.

Additionally, a best fit report for the Entity is included. This shows the importance of specific values on predictiveness of an attribute.

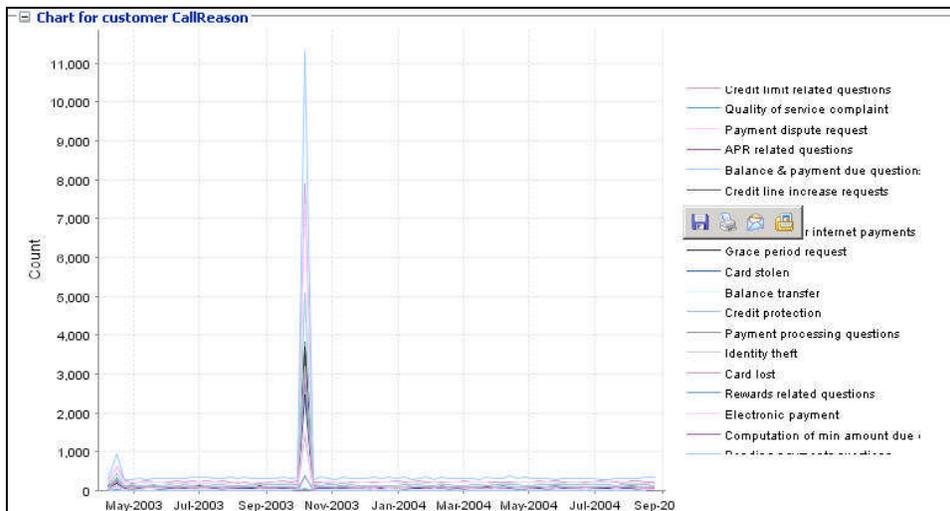
In this report we can make a couple of observations. Looking at the Customer entity, and the particular attribute amount of pending transactions, we can see that we are most likely to predict that they will be interested in an offer to waive their account fees. Specifically, if the customer has between 701 to 800 pending transactions we find this very predictive.

Entity Analysis Trends



The Entity Analysis Trends report shows the change of predictiveness for an attributes of an Entity over a period of time. The timeframe can be adjusted at the top of the report.

In addition, a trend chart is provided.



1.2.5 **About the Decision Center toolbar**

The toolbar offers the following features:

	Up a level
	Down a level
	Select an Inline Service
	Change perspective
	Redeploy the Inline Service
	Discard changes
	Logout
	Print the current report page

1.3 **About perspectives**

There are three perspectives within Decision Center: Explore, Design and At a Glance. These perspectives are designed to give easy access to your primary use of Decision Center. The Inline Service Navigator changes according to the perspective you are using.

1.3.1 **About the Explore perspective**

The Explore perspective reveals several reports based on the Performance Goals that the Siebel RTD is tracking. Reports are available for online viewing and printing.

1.3.2 **About the Design perspective**

The Design perspective gives you access to editable forms that allow you to make changes to the Inline Service from Decision Center and re-deploy to the Siebel Real-Time Decision Server. These changes include:

1. Adjust and create Scoring and Filtering Rules.
2. Adjust weighting for Performance Metrics on Decisions.
3. Add and remove segments that are targeted.
4. Create alerts.
5. Modify the Filtering rules of choices and choice groups.
6. Deploy Inline Service to a different server.

1.3.3 **About the At a Glance perspective**

The At a Glance perspective gives a high level summary of the reports contained in the Inline Service.

Section 2: About modifying and redeploying an Inline Service

There are three areas that permissions are set for users of Decision Center:

- editing permission for the Inline Service that you are working with.
- permission to deploy to a server, potentially in a cluster.
- permission to use a perspective in Decision Center.

In order to edit and redeploy an Inline Service, you must have permission to edit, permission to deploy to a server and permission to use the Design perspective.

If you receive an error when trying to open the Inline Service for editing, you may not have permission on the Siebel Real-Time Decision Server or with the Inline Service to edit. Contact your system administrator to check your rights.

In general, to make changes to the Inline Service:

- 1 When opening the Inline Service, check **Open the Inline Service for editing**. This gives you exclusive editing rights to the Inline Service.
- 2 Change to the **Design** perspective.
- 3 Select the element that you would like to modify, and use the editing pane to make changes.
- 4 Redeploy to a Siebel Real-Time Decision Server using the Redeploy button  on the toolbar. The Inline Service is redeployed to the same state as it was opened for editing in. By default, deployment states are: Development, QA and Production. Your system administrator may have added custom states.
- 5 To promote an Inline Service to a new state, use the Promote button  on the toolbar. Choose the deployment state to promote the Inline Service to.

As you redeploy or promote an Inline Service, you have the option to keep the Inline Service open for editing. This retains your exclusive editing rights for the Inline Service. If you choose to redeploy without keeping it open for editing others will be able to edit the Inline Service.

Certain elements of deployed Inline Services can be modified by the business user in Decision Center. The following section outlines the process for modifying and redeploying the Inline Service.

2.1 Working with Choice Groups and Choices

Choice Groups and Choices are a generic way of grouping targets for analysis or Choice to be offered by an Advisor in a structured manner. Choices are used in two ways:

- As attributes that an analytical model will use to generate learnings and show correlations in incoming data.
- As targets for a Decision that will decide on the best response and pass that decision onto an outside system.

Choice Groups and Choices are structured in a hierarchical fashion. Both attributes and rules of Choice Groups and Choices are inherited from parents to children. This allows the Siebel RTD to have Choice Groups configured in a way that ensures uniformity when the Inline Service is first deployed, but the also allows the flexibility to add additional individual Choices and Choice Groups through the Decision Center interface after the Inline Service is deployed.

You can perform the following actions with Choice Groups and Choices:

2.1.1 **Modifying Choice Groups and Choices**

- 1 Select a Choice Group or Choice to modify and select the Configuration tab.
- 2 Use the Basic subtab to modify the Name or Description.
- 3 Use the Attributes subtab to modify the value of the attributes. Attributes may only be edited at the Choice level.

2.1.2 **Cloning a Choice Group or Choice**

- 1 Select the Choice Group or Choice to modify and select the Configuration tab.
- 2 Use the Clone subtab to clone the object. Cloning an object produces an identical object, with the same values for all attributes. The only difference is the name given to the new object.
- 3 If you would like to change attribute values on Choices, use the Attribute tab.

2.1.3 **Adding a Choice Group**

- 1 Select the Choice Group where you want the new group to appear as a child and select the Configuration tab.
- 2 Use the **New Group** subtab to create a new Choice Group object.
- 3 **Name** the Group and click **Create**. The Group is created under the Choice Group you originally selected.



2.1.4 **Adding a Choice**

- 1 Select the Choice Group where you want the new Choice(s) to appear as a child and select the Configuration tab.
- 2 Use the New Choices subtab to create new Choice object(s).
- 3 Enter up to 10 Names for the Choice(s) and click Create. The Choice(s) are created under the Choice Group you originally selected. They inherit the attributes of the Choice Group.
- 4 To set the values of the attributes, see 2.1.1 Modifying Choice Groups and Choices above.

2.1.5 **Moving a Choice**

- 1 Select the Choice Group that contains the Choice(s) to move and select the Configuration tab.
- 2 Use the Move subtab to move Choices.
- 3 Select the Choice(s) to move and the Choice Group in which to move them. Click Save.

2.1.6 **Deleting a Choice or Choice Group**

- 1 Select the Choice Group or Choice to delete and select the Configuration tab.
- 2 Use the Delete subtab to delete Choice Groups or Choices.
- 3 Confirm the deletion by checking the box. Click Delete.



Note: Deleting a Choice or Choice Group is irreversible. You must delete all Choices in a Choice Group before deleting the group.

2.2 About rules

Rules have three functions within Inline Services:

1. Eligibility Rules:

- Used to determine whether Choice Groups and Choices are eligible to participate in a Decision.

2. Filtering Rules:

- Used as components of other rules.
- Used to segment population, so that performance metrics can be weighted more heavily for one segment than another.

3. Scoring Rules:

- Used for scoring Choices Groups and Choices. The score is used by the Decision to determine the proper Choice.

2.2.1 About Choice Group and Choice Eligibility Rules

As part of a Choice or Choice Group the Eligibility Rule determines whether the Choice is eligible to participate in the Decision or logic that makes the Choice selection. **Choice Groups** and **Choices** are available in the Inline Service Navigator under **Decision Process** and are identified by the icons  and  respectively.

An eligibility rule determines whether the sub-tree headed by a Choice Group is eligible for a decision. Note that even if Choices themselves are eligible, they will not be eligible unless all their ancestors are eligible.

Choice Group Eligibility Rules are accessed by selecting the Choice Group and then selecting **Definition**→**Group Eligibility** or **Choice Eligibility**.

Choice Eligibility Rules are accessed by selecting the Choice and then selecting **Definition**→**Eligibility**.

2.2.2 Adding an eligibility rule

- 1 Go to the **Group Eligibility**, **Choice Eligibility** or **Eligibility** tab of the Choice or Choice Group.
- 2 Add a new rule as described in 2.3.1 *Adding rule s*.

Evaluating Choice Group rules and Choice rules

Choice Group rules and Choice rules are inherited and additive. That is, if there are rules at the Choice Group (Group and Choice rule) and rules at the Choice level, it is as if there is a logical AND extending the rules. The inherited rules are shown in an expandable section at the top of the rule labeled **Inherited eligibility conditions**. Use the buttons  and  to expand and collapse the sections.

Take the following instance:

Group₁ has rules GroupRule₁ and ChoiceRule₁

Group₂ is a child of Group₁ and has rules GroupRule₂ and ChoiceRule₂

Group₂ has a Choice, Choice₁, and it has a rule, Rule₁

In evaluating the rules for Choice₁, the following rules will be invoked:

GroupRule1 AND GroupRule2 AND ChoiceRule1 AND ChoiceRule2 AND Rule1

Determining eligibility

When determining eligibility for a choice, the choice rule is first tested on the Choice. Then, if the Choice is eligible, the parent rules are tested.

Eligibility for the following Choice:

Group₁ has rule GroupRule₁

Group₂ is a child of Group₁ and has rule GroupRule₂

Group₂ has a Choice, Choice₁, and it has a rule, Rule₁

would be determined in the following manner:

If Choice₁ is eligible with Rule₁ test with GroupRule₂ if eligible test with GroupRule₁

2.2.3 About Filtering Rules

As stand alone rules, Filtering Rules can be used to segment population or be used as components of other rules. Stand alone rules are reusable by many different elements.

Stand alone Filtering Rules are accessed under **Decision Process** → **Targeting Rules** → **Filtering Rules**.

2.2.4 Using Filtering rules to Segment Population

Filtering rules can be used to segment the population. These in turn are assigned to a Decision to apply performance metrics to different segments of the population. A typical filtering rule used to segment population may be as shown below:

```
People to sell to
All of the following
1. customer / Age >= 18
2. customer / CreditLineAmount >= 8000
```

This rule targets customers over the age of 18 with a credit line amount over \$8000. Filtering rules are used by Decisions.

To use a Filtering rule to segment population:

- 1 To add a new rule, use the  filtering rule button on the toolbar above the navigator.
- 2 Create a stand alone Filtering rule for segmentation as in 2.3.1 *Adding rule s*.
- 3 Select the Decision that you want to segment population for. Select **Definition** → **Priorities**.
- 4 In the editor, using **Segment**, select the Filtering rule that defines the segment of population.
- 5 Optionally, you can adjust the weighting of the performance metrics for this segment.
- 6 Use **Save**  to save your changes.

2.2.5 Adjusting the priorities of business goals by population segment

One of the changes you can make to an Inline Service is to adjust the priorities of your business goals. The outcome of a decision is made based on the performance goals that are defined for your organization, the population segments that have been defined and the prioritization of those goals for each segment of the population. Priorities can be adjusted on the **Decision**→**Definition**→**Priorities** subtab.

Take for instance the following priorities:

Segments	Selection Function	
Segment to Retain	Customer Retention	71%
	Revenue	29%
otherwise	Customer Retention	30%
	Revenue	70%

The population segment, Segment to Retain, has the Customer Retention business goal heavily weighted in its favor, while the remaining population has maximizing revenue as a priority.

If there is a special circumstance or a change in population, you can adjust this prioritization by sliding the weighting bar. Once adjusted you must re-deploy your Inline Service and login to Decision Center to see your changes.

2.2.6 About Scoring Rules

Scoring rules are available to create score models for Choices. Choices either have a score assigned or inherit a score from their Choice Group. To modify the scoring rules for a Choice, select the Choice then **Configuration**→**Scores**.

In addition to the functionality that Filtering rules have, Scoring Rules evaluate to a score, in the form of a double data type. Scoring Rules have a default value if none of the rule segments evaluate to true.

If All of the following 1. <code>session / customer / CreditLineAmount > 0</code> 2. <code>session / customer / CreditLineAmount <= 50000</code>	Then 7.0
If All of the following 1. <code>session / customer / CreditLineAmount > 50000</code> 2. <code>session / customer / CreditLineAmount <= 60000</code>	Then 6.0
If All of the following 1. <code>session / customer / CreditLineAmount > 60000</code> 2. <code>session / customer / CreditLineAmount <= 70000</code>	Then 5.0
If All of the following 1. <code>session / customer / CreditLineAmount > 70000</code> 2. <code>session / customer / CreditLineAmount <= 80000</code>	Then 4.0
Otherwise...	The value is: 3

For instance, the Scoring Rule above is assigning scores based on a customer's credit line amount. If the fit none of the credit line range categories, the score defaults to 3.

2.3 Working with rules

Rules are used for several purposes within Siebel Decision Studio and Siebel Decision Center: for determining the eligibility of Choice Groups and Choices to take part in a Decision; as stand alone, re-usable rules for Filtering population segments; and, as stand alone, re-usable rules for scoring Choices.

The Rule editor toolbar provides access to features used to edit rules. This toolbar is sensitive to the context of the task you are performing. A right-click context sensitive menu is also available with these functions.



The functions from left to right are:

- Edit rule properties
- Add Rule
- Add Ruleset
- Delete
- Invert
- Move up
- Move down
- Copy selection to clipboard
- Cut selection to clipboard
- Paste from clipboard

The editors that are used to create rules are very similar. The following section describes how to create rules using these editors.

2.3.1 Adding rule segments

Add a rule using the **Add Rule**  button. There are two types of rule segments to add: Rules and Rule Sets. By default rules are two operand rules. To change to a single operand rule, click the rule's number to select it. Click the  in the corner of the operand to choose between single and double operands. Single operands always evaluate as a Boolean.

About logical operators

There are four logical operators for a set of rules:

- All of the following (logical and). The Logical Expression will be true when all of its child expressions are satisfied.
- Any of the following (logical or). The Logical Expression will be true when any one of its children is true.
- None of the following (logical not and). The Logical Expression will be true when all of its child expressions are false.
- Not all of the following (logical not or). The Logical Expression will be true when any one of its child expressions are false.

You can change the value of the Logical Operator by selecting it, clicking on and selecting another one from the popup menu that appears.

Editing rule properties

Both Filtering and Scoring rules have Rule properties that can be set. To edit rule properties, click the **Rule properties**  button. **Edit rule properties** appears.

Rule properties include call templates and negative call templates. Call templates provide a user friendly way to describe how to call a rule from another rule.

To define a call template, add the number of parameters for the rule using the **Add** button under **Parameters**. Using {0}, {1}, and so on as arguments, and phrasing to describe the rule, define the template for call. It is important to use good phrasing as this is what will be shown when using the rule.

For instance, a rule that checks how many calls that have come in from a user in the last x number of days, could be phrased as such:

{0} calls in last {1} days

The negative call template is used when a rule is inverted, and should express the opposite:

Not {0} calls in the last {1} days

Rule properties also allow you to assign which Choice Group to use with the rule. By checking **Use with choice group** you can specify which Choice Group or its Choices will provide the Choice attributes for use by parameters. These attributes will be available when you edit the value of an operand.

Selecting an operator

Click on the operator  and click on the lower right corner and select an operator.

The following operators are available:

none	A Simple Expression that only has one operand
=	Left is equal to Right
≠	Left is not equal to Right
<	Left is less than Right
<=	Left is less than or equal to Right
>	Left is greater than Right
>=	Left is greater than or equal to Right
in	Left value is contained in a List on the Right side
not in	Left value is not contained in a List on the Right side
includes all of	Left list includes all of the values of the Right list
excludes all of	Left list contains none of the values of the Right list

includes any of	Left list includes any one of the values of the Right list
does not include all of	Left list does not include all of the values of the list on the Right

Editing the value of a rule element

To edit the elements of the rule, click on the left side and then on the ellipsis . **Edit Value** appears. You may choose from a constant, attribute or function call. Check **Array** at the top of the page to specify an array value.

If you choose **Constant** provide:

Data type	The data type of the item.
Value	A constant value.

If you have checked **Array**, add as many items to the array as needed and then choose a datatype and provide a value for each.

If you choose **Attribute** provide one of the following:

Group attribute	Attributes that are part of the Choice Group or its Choices that is selected in the Properties of the rule.
Session attribute	Attributes that are part of the Session entity.
Application attribute	Attributes that are a member of the Application element

Optionally, check **Apply filter type** and choose a **Data type** to filter the attributes by type. If you have checked **Array**, add as many items to the array as needed and then assign an attribute value for each.

If you choose **Function call** provide one of the following:

Filtering rules	Stand-alone filtering rules defined for the Inline Service.
Scoring rules	Stand-alone scoring rules defined for the Inline Service.
Function calls	Stand-alone functions defined for the Inline Service.

Optionally, check **Apply filter type** and choose a **Data type** to filter the attributes by type. If you have checked **Array**, add as many items to the array as needed and then assign a function or rule for each.

Adding a Ruleset

Click the **Add Ruleset**  button. A new group of rules appears in the expression. By default it is an **All of the following** expression. To change the expression, click on the right corner and change it to the expression you wish.

Inverting a rule

Using the **Invert**  button, you can invert different elements of the rule. By selecting the number of a rule segment, you can invert the operator of a rule. For instance, if the rule operand was '=', it will be inverted to '<>'.

Logical operator for a rule can also be inverted. Select the logical operator and use **Invert**. For instance 'All of the following' becomes 'Not all of the following'.

The final use for **Invert** is to invert a Boolean, or single operand, rule. When this type of rule is inverted, it is transformed to the negative call template of the function that defines the rule.

2.3.2 **Moving rules and rulesets**

To change the order of rules and rulesets within a rule:

- 1 Select the rule segment by clicking on its number.
- 2 Use the following operations from the rule editor toolbar to move rule segments:

	Delete rule segment.
	Copy to clipboard.
	Cut rule segment.
	Move rule segment up.
	Move rule segment up.

- 3 Use **Save**  to save your changes.

2.4 **Setting alerts**

Reports with in Decision Center come equipped with the ability to set Alerts. To create an Alert, use the **Setup Alert** link located at the bottom of the report. There are three parts to an Alert:

- Message: the customizable message that will be sent with the alert.
- Condition: the condition that must be met for the Alert to be sent.
- Delivery options: where and how the Alert message is delivered.

2.4.1 **Creating an Alert**

- 1 Go to the report page that you would like to create an Alert for.
- 2 Click Setup Alert located below the report.
- 3 Configure the Alert as outlined below.

2.4.2 **Creating an Alert Message**

You can customize the email message sent with an Alert using keyword substitution. For example:

Step 1: Alert setup

Name:

Type: Counts

Alert Message:

Tahoma **B** *I* U [List Icons] [Text Icon]

The {choice} has been {event} {count} times.

variable	Description
{choice}	Description
{event}	The outcome
{count}	Count of individuals reaching this outcome for this choice
{percentage}	Percentage of individuals reaching this outcome for this choice

This shows a message that will be completed with actual values when the alert is triggered. Each Alert has its available keywords list below. Keywords are enclosed in braces, {}.

2.4.3 Setting the Alert condition

The Alert condition defines when the Alert will be sent. When the condition is reached, the Alert is sent according to the delivery options.

Step 2: Alert conditions

choice: Gold Card

Channel: All

event:

count: Minimum: Maximum:

percentage: 0..100 Minimum: % Maximum: %

This condition defines that the Alert be sent when a minimum of 50 Gold Cards have had interest from the customer.

2.4.4 Setting Delivery options

Delivery options allow you to specify where and how often the Alert is sent. By default the Alert is sent to your Decision Center Dashboard. You may also specify an email address and frequency options.

Step 3: Alert delivery	
Delivery	<input checked="" type="checkbox"/> Send to your Decision Center Dashboard <input type="checkbox"/> Email to: <input type="text"/> <small>(use commas to separate multiple email addresses)</small>
Frequency	<input type="radio"/> Deliver alert throughout the day <input checked="" type="radio"/> Daily (Deliver alert at most once per day) <input type="radio"/> Weekly (Deliver alert at most once per week) <input type="radio"/> Monthly (Deliver alert at most once per month)