Introduction

This document contains information about how Pega Marketing for Financial Services 7.31 captures Interaction History. This is an extension of the Pega Marketing 7.31 Interaction History features. Refer to the Pega Marketing 7.31 User Guide on the Pega Marketing product page for details. Customers and sales representatives are recommended to use this as a reference for implementing their own functionality around Interaction History. While the back-end rules that support the Interaction History functionality is included in the PegaMarketingFS application, the rules listed in this document are in the sample application (PegaMarketingFS_Sample).

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Interaction History

Interaction History is a storage location for the actions and choices made by a customer so that real time decisioning and predictive analytics can be utilized to present the best offer or take the next best action for a specific customer. For more details about Interaction History, see the articles on decision management (covers ADM, Interaction History, and VBD) available on PDN.

The information from Interaction History is used in a variety of places within the application. Some key functionality include in adaptive models and strategy rules.

Adaptive model learning is based on the outcome dimension in the Interaction History.
Next-best-action strategies refer to the Interaction History to determine how many times a proposition has been offered to a customer, and how many times it has been rejected or accepted, and use that information to make decisions.

Interaction History is also captured and used in the below functional areas in Pega Marketing for Financial Services:

- Microsites
- Email
- Offer flows
- Real-time containers

**Capturing Interaction History**

The following table represents the fields captured for Interaction History and their relative use.

<table>
<thead>
<tr>
<th>Property name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fact ID</td>
<td>An automatically generated unique fact record ID. Initially generated IDs start at a random value, and then the value is incremented by 1 for every new ID.</td>
</tr>
<tr>
<td>Property name</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Subject ID</td>
<td>The subject ID that was used when setting the results of the strategy. It represents the identity (the customer) with whom the integration was handled.</td>
</tr>
<tr>
<td>Outcome time</td>
<td>A time stamp when the record was stored in the Interaction History tables.</td>
</tr>
<tr>
<td>Business issue</td>
<td>The issue to which the proposition belongs. It is the ultimate purpose of the proposition (for example: Sales, Retention, Service). Together with pyGroup and pyName, it uniquely identifies the proposition.</td>
</tr>
<tr>
<td>Group</td>
<td>The group to which the proposition belongs (for example: Phones, Discounts, Tariffs). Together with pyIssue and pyName, it uniquely identifies the proposition.</td>
</tr>
<tr>
<td>Proposition</td>
<td>The name of the proposition. Together with pyIssue and pyGroup, it uniquely identifies the proposition.</td>
</tr>
<tr>
<td>Outcome</td>
<td>Contains the result of the interaction (for example: accepted, rejected).</td>
</tr>
<tr>
<td>Propensity</td>
<td>Calculated propensity for the action. It is the likelihood that a customer will accept a particular proposition. The value for propensity is within the range of 0 to 1.</td>
</tr>
<tr>
<td>Direction</td>
<td>The direction that is used in the interaction (for example: inbound, outbound).</td>
</tr>
<tr>
<td>Channel</td>
<td>The channel that is used in the interaction (for example: web, call center).</td>
</tr>
<tr>
<td>Interaction</td>
<td>The Interaction rule instance.</td>
</tr>
<tr>
<td>Strategy</td>
<td>The Strategy rule instance.</td>
</tr>
<tr>
<td>Operator</td>
<td>The person who handled the interaction. The default is the Operator ID.</td>
</tr>
</tbody>
</table>

Pega Marketing for Financial Services captures this information as part of the Pega-provided microsites (autoloan, nonbundles, and bundled), emails, and as a headless integration through real-time containers. This includes capturing clicks on links or images, capturing navigation across different microsite “pages,” and through services to other applications.

**Headless integration (Real-time containers)**

Real-time containers support presenting offers or next-best-actions through a headless REST service. Pega Marketing for Financial Services provides NextBestAction and TopOffers containers to support the application as a centralized decision hub for other Pega applications such as Pega Collections, and Pega Customer Service for Financial Services.
Within Real-time container rules, configure the “Container Details” tab to enable Interaction History capture.

**Captured on retrieval** – Select this option to have the Container processing API (ExecuteWebContainer) automatically capture an impression before rendering the Container.

*CaptureResponse is a REST service that is used by Pega Customer Service for Financial Services to respond to Offers triggered via TopOffers container.*

**MicrositesAutoloan Microsite**

The AutoLoanCreditOffers data flow rule stores the results coming from the “AutoLoanCredit” decision strategy in Interaction History whenever someone submits an application for pre-approval.
Offers with “Approved” Outcome gets presented to customers in Autoloan microsite.
The SaveOfferResponse interaction rule updates the Interaction History for the offer response after the user clicks Accept. The interaction rule is called in the activity GetOfferDetailsWrapper.

For more details on Autoloan microsite, see *Pre-qualify Credit Offers via Mobile Devices*.

**Non-bundled offers microsite**

Pega Marketing for Financial Services includes the **NonBundledOffers** microsite which demos displaying single offers. The below table includes rules which support Interaction History table update in for this demo scenario.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Interaction History outcome</th>
<th>Referenced rule</th>
<th>Interaction History interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open microsite from a banner ad/CSFS Portal</td>
<td>Clicked</td>
<td>Service HTTP: CaptureWebClickThrough [PegaMKT-Engine]</td>
<td></td>
</tr>
<tr>
<td>Clicking on banner ad</td>
<td>Impression</td>
<td>UpdateIH (Flow.UpdateIH)</td>
<td>SaveOfferResponse</td>
</tr>
</tbody>
</table>
The “Update Status” shape is used in offer flow to capture offer responses from the Email channel. This shape in offer flows is designed to update the Interaction History.

Bundled microsite (fixed bundle)

Pega Marketing for Financial Services includes the BundledOffers microsite which demos displaying bundled offers. This example demonstrates fixed bundles where the customer must select the bundle in
its entirety (all members). The below table includes rules which support Interaction History table update in for this demo scenario.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Interaction History outcome</th>
<th>Referenced rule</th>
<th>Interaction History interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open microsite from a banner ad/CSFS Portal</td>
<td>Clicked</td>
<td>Service HTTP: CaptureWebClickThrough [PegaMKT-Engine]</td>
<td></td>
</tr>
<tr>
<td>Clicking on banner ad</td>
<td>Impression</td>
<td>UpdateIH (Flow:UpdateIH)</td>
<td>SaveOfferResponse</td>
</tr>
<tr>
<td>Request more info</td>
<td>Pending</td>
<td>UpdateBundleIH (Activity)</td>
<td>SaveOfferResponse</td>
</tr>
<tr>
<td>Open account - Microsite</td>
<td>Accepted</td>
<td>CaptureMicrositeInteraction (Activity)</td>
<td>MicrositeInteraction</td>
</tr>
<tr>
<td>Email – Open account</td>
<td>Accepted</td>
<td>Update Status shape in (Offer flows) and AcceptBundleMembersOffers strategy</td>
<td></td>
</tr>
<tr>
<td>Email – No response within 30 minutes</td>
<td>NoResponse</td>
<td>WaitExpired - update status shape in (Offer flows)</td>
<td></td>
</tr>
</tbody>
</table>

**Bundled microsite (flexible bundle)**

Pega Marketing for Financial Services includes the BundledOffers microsite which demos displaying bundled offers. This example demonstrates flexible bundles where the customer is presented a series of questions and answers from which a bundle is presented based on the captured response.

The interaction history functionality works similarly to fixed bundles. There are some additional values set for the interaction history in the property set shape of the strategy FlexibleBundles.
This helps capture the impression on loading the bundle offers in the microsite. The actual update of Interaction History is still done in the offer flows. See the highlighted shapes in the below example FirstMortgageFiveOneARM where Interaction History is updated for the bundle parent and bundle (child) member offers.
Emails

Email Treatment rules automatically update the Interaction History when emails are sent. If the “Track Email Open Rate” checkbox is enabled, then, Interaction History will also capture the Email open impression.

Interaction History can also capture when a customer clicks on a link, button, or image within an email. See the Pega-provided email treatment rules for how this is accomplished. For example, the “Open Account” button in EmailOfferDetails sends offer response as “Accepted” to an Offer flow where update status shape takes the offer response and updates Interaction History.
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