Rezolve Overview – Shoppable Ads User Experience

Version 1.5

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Introduction to Rezolve

Rezolve™ is a ground-breaking mobile-payments SDK and platform that allows banks, mobile network operators, retailers, media companies and other mobile consumer audience owners to deliver rich and engaging consumer experiences to their users. With the Rezolve Inside™ SDK embedded in a host mobile app, consumers can pay bills, top-up mobile devices, and shop for retail products and services with simple navigation and a 'scan-and-tap' on their mobile device. By combining the native capture mechanisms of the mobile device – camera, microphone and location awareness – with a mobile wallet and Rezolve's powerful merchant integration technologies, Rezolve turns any mobile device into an active engagement tool for shopping and for managing consumer mobility. The consumer's experience is intuitive, fast and secure, while Rezolve orchestrates all user flows, data flows, order creation and payments, integrating to merchant commerce platforms and payment providers as needed. With Rezolve Inside™, the Host App owner benefits from new lines of consumer engagement and participates in transaction revenues, without having to develop code, host operations, or manage security.

## Introduction to Rezolve Shoppable Ads

The Rezolve Inside™ SDK allows app owners to quickly deliver rich mobile commerce user experiences *inside* their existing consumer apps. Those experiences include Shopping Malls, Bill Payment, Account Top Up, and Shoppable Ads.

Shoppable Ads turns print, audio, video, in-home, in-store, and outdoor advertising into a sales channel, by allowing a mobile phone user to scan any piece of ad content (e.g. magazine ad, poster, window display, flyer, point of sale collateral, streaming audio-visual ad, broadcast TV or radio content, digital billboard, etc.) with one of the mobile device's sensors (e.g. camera, microphone). The Rezolve Inside™ SDK interprets imperceptible and inaudible digital watermarks in the media to trigger the presentation of product or service details that the consumer can select and pay for. In this way, a user scanning a bus stop poster or magazine ad for the latest cosmetic product can scan, discover, select, and purchase the product on impulse and in just a few taps of their finger.

This document provides an overview of the Rezolve Shoppable Ads user experience so that Rezolve partners and clients can consider modes of deployment and integration into their existing or planned mobile apps.

Consumer User Flow Summary

Shoppable Ads User Flow
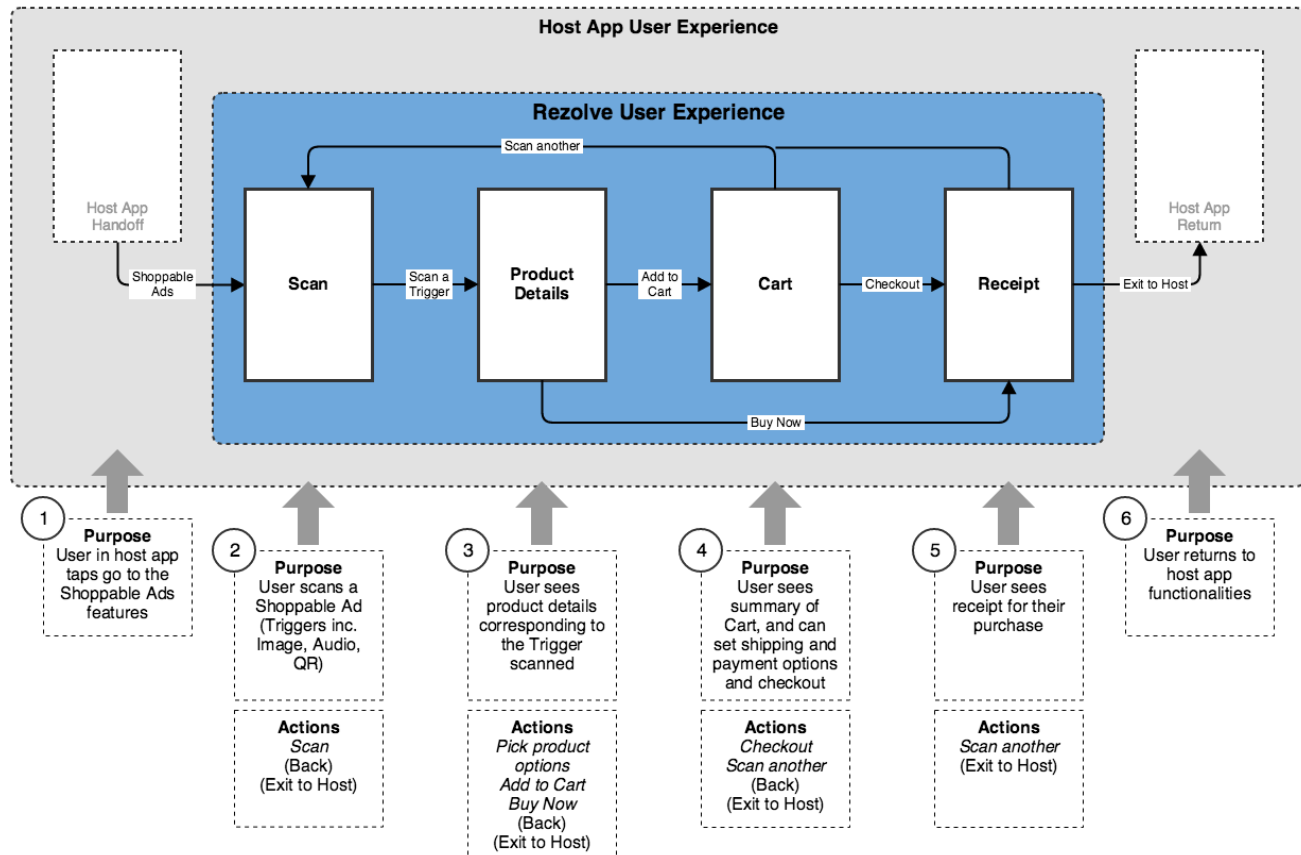
1. **Host App Handoff** - Host Apps can provide a wide range of consumer services at their core, and the Rezolve Inside ™ SDK allows app owners to quickly add mobile commerce capabilities. The way in which those capabilities are presented to the user is determined by the app owner, but at its simplest this could be a menu item, button, or link that users tap to start shopping - the Host App leads the user into the Shoppable Ads functionality. The transition into the Shoppable Ads capability is seamless for the user because the Rezolve user experience is integral to the Host App UI.

2. **Scan view** - A user may enter the Shoppable Ads flow at any point, for example at the Cart view to Checkout a previously created Cart, although a logical start point (especially for first time use and when the Cart is empty) is the Scan view. This view uses the sensors of the mobile device (e.g. camera, microphone) to scan a Trigger. Rezolve supports a range of Triggers native in the SDK, including Image Watermarks, Image Fingerprints, Audio Watermarks, 2D Barcodes (e.g. QR Codes), and 1D Barcodes. Triggers are created by Admin users in the Merchant Portal.

3. **Product Details view** - The result of Scanning a Trigger is normally to see the Product Detail view. This view presents the user with the details of the product or service corresponding to the Trigger that was scanned. This view provides rich product or service information, for example, product name, images, descriptions, and any user-selectable options (e.g. size, color, style). The product

information presented in the Product Detail view is obtained from Merchants' commerce systems through Merchant integrations and via the indexing and caching capabilities in the Rezolve Commerce Engine. Users can pick any user-selectable options, pick their payment method and shipping method, and either Buy Now or Add to Cart.

4. **Cart** – This view presents users with a review of their Cart, which is composed of products or services that have been Added to Cart. Users can view and update the contents of the Cart, for example change quantities and remove items, and they can select and update payment and shipping methods. The Cart also presents a price breakdown, including any taxes and shipping components. Users can elect to Checkout their Cart.

5. **Receipt** – As a result of a Buy Now or a Checkout Cart action, users are presented with the Receipt view. The Receipt summarizes the transaction that was just completed, and it represents the natural conclusion of a Shoppable Ads flow. From here the user may be guided back into the Shoppable Ads flow (e.g. Scan another ad), may be directed to their transaction history, or to any other logical step either within the Rezolve flow or in the Host App.

6. **Return to Host** – Where the Rezolve Shoppable Ads capability exists adjacent to other Host App capabilities, the user may be returned to the Host App so that they can conduct any other actions towards which that the app owner wishes to guide them.

Shoppable Ads Triggers

Rezolve Shoppable Ads uses a range of *Triggers* to initiate the Shoppable Ads consumer user experience, with the choice of Triggers being dependent upon the desired consumer experience. Triggers include:

- Rezolve Image Watermarks
- Rezolve Audio Watermarks
- Rezolve Image Recognition
- Rezolve Barcode Scanning
- Rezolve Extended Triggers

Rezolve Image Watermarks

Source visual ad images are modified to incorporate visual digital watermarks that are imperceptible to the human eye yet detectable by Rezolve-equipped smartphone apps. The resultant composite images are output in high-quality formats for ad media reproduction and use. With Rezolve Image Watermarks the same piece of visual ad media can be encoded with distinct watermarks for use in different ad placements, making each placement a uniquely trackable and transactional sales channel. Consumers point their smartphone at the ad media, see related products and information, and transact in just a few simple clicks.

Rezolve Audio Watermarks

Source audio or audio/visual ad streams are modified to incorporate audible digital watermarks that are imperceptible to the human ear yet detectable by Rezolve-equipped smartphone apps. The resultant composite audio or audio/visual streams are output in high-quality audio and audio/visual

formats for live multiplexing or post-production mixing into a variety of broadcast and streaming ad media use. With Rezolve Audio Watermarks the same piece of audio or audio/visual ad media can be encoded with distinct watermarks for use in different ad placements, making each placement a uniquely trackable and transactional sales channel. Consumers point their smartphone at the audio source, see related products and information, and transact in just a few simple clicks.

Rezolve Image Recognition

Source visual ad images are ingested analyzed to determine unique visual fingerprints that can be later recognized by users with Rezolve-equipped smartphone apps. With Rezolve Image Recognition, no post production image modification is needed to allow any new or even pre-existing visual media can become a trackable ad and direct sales channel. Consumers point their smartphone at the ad media, see related products and information, and transact in just a few simple clicks.

Rezolve Barcode Scanning

Rezolve Inside SDK can recognize and decode existing or newly created 1D and 2D barcodes, including UPC, EAN, and QR codes. With Rezolve Barcode Scanning any business that already utilizes standard or even proprietary barcodes in their business can offer convenient consumer-facing mobile apps to increase consumer engagement and convenience. Barcodes used on printed bills, top up accounts, or even physical hardware can trigger a Rezolve-enabled transaction, for example scanning a barcode on a toll road transponder to quickly and easily top up the toll road users pre-paid account, paying parking fines, or even topping up pre-paid mobile phone or credit card accounts.

Rezolve Extended Triggers

The Rezolve Shoppable Ads workflows are flexible to be responsive to an almost limitless number of Trigger events, and Rezolve actively encourages Partners and Customers to explore co-development opportunities with Rezolve to suit their specific markets and use cases. Rezolve Labs has developed Extended Trigger prototypes for a BLE beacons, Geo-location, and WiFi triggers and is always interested to explore commercialization of these and other technologies.

User Accounts

In most cases, for a user to be able to complete a Shoppable Ads flow, the Rezolve platform must know certain information about the user. This information consists of three types, collectively referred to as User Account.

- User Identity
- User Payment Methods
- User Address Book

Where a User Account, or any element needed to complete the flow (e.g. at least one payment method), does not exist the user is guided to complete the missing information at first time need. For example, a user attempting to Buy Now, where no Payment Method exists in their associated User Account, will be prompted to enter a Payment Method before they can proceed.

Rezolve supports two User Account models: *Internal* and *Federated*.

Internal User Accounts

Internal User Accounts operate in such a way that Rezolve is the system of record for User Account information. Rezolve creates and stores all user account information, or tokens representative thereof, inside of the Rezolve platform. The Rezolve Inside ™ SDK provides functions to allow User Account Registration and Management so that these can be controlled by Rezolve but surfaced in the Host App user interface.

Federated User Accounts

Federated User Accounts operate in such a way that the Host App is the system of record for User Account information. The Host App creates and stores all user account information, or tokens representative thereof, inside of the Host App platform. The Rezolve Inside ™ SDK provides functions to allow Rezolve to federate User Account information, or keys representative thereof, from the Host App, and in this model User Registration and Management is controlled by the Host App.

Summary

Using the Rezolve Inside ™ SDK, app owners can embed the Rezolve Shoppable Ads user experience into their existing or planned mobile apps to deliver a deliver a rich mobile commerce experience for their users. The Shoppable Ads experience is monetized through direct merchant commissions or affiliate network integration, driving meaningful revenues for the Host App provider. From a consumer perspective, Shoppable Ads provides an engaging and fun shopping experience that offers end users added utility, instant shopping gratification, while driving increased and more habituated app usage.

Rezolve