CounterPath

AT&T
FOUNDRY™
WHERE IDEAS ARE MADE

3x Fasters Innovation

Idea · Funding · Development · Testing · Launch
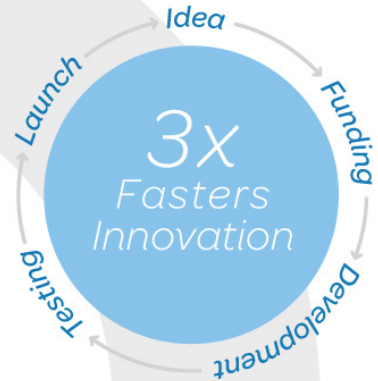
Bria SDK - AT&T Foundry

Case Study

About AT&T Foundries

AT&T is among the world's largest mobile and fixed-line communications providers. It operates several AT&T Foundries across the world. The purpose of the AT&T Foundries is to spearhead innovation of products and services that may be considered for potential commercial launch in later stages. AT&T has partnered with other technology leaders for support of the Foundries.

To rapidly prototype these new products and services, Foundry members from several disciplines (e.g. engineering, user research, design) work in close proximity to each other. In addition to improving communications and shortening development cycles, it also keeps teams focused on user-centric requirements that are essential to a products or service's success.

Foundry teams have as a guiding principle that they should focus innovation and development on stitching together existing technologies in novel ways to enable new user experiences. In other words, teams are not supposed to re-invent existing technologies unless warranted. To the extent that existing open source or commercial SDKs can streamline prototype development, Foundry teams should use them to expedite the innovation process. Suppliers of these building block technologies that prove easy and fast to integrate, and have rich and flexible roadmaps, have the potential to appear in many AT&T Foundry prototypes that may lead to commercial products.

Foundry prototypes help to expedite and inform decision-making processes within the AT&T organization, which helps to avoid hurdles that may slow down prototyping and commercialization processes.

The Formula:

AT&T Developers
Technology suppliers

+

AT&T Foundry

=

Applications +
Products + Prototypes

Voice Communications in Automobiles

Many modern cars come equipped with technology to provide 3G or 4G data connectivity to the car. The AT&T Foundry team looked to improve the voice (and messaging) experience of users within a car by leveraging this existing data connectivity as part of one of their projects. In this particular project, the AT&T Foundry team sought to prototype a voice experience without using the voice or data connectivity of any mobile device that user may (or may not) bring with them in the car. The voice service should be personalized to an occupant of the car, but should not rely on that person's device actively tethering to the head unit (e.g. connecting via Bluetooth) or even the presence of the person's device. This solution would address a person's need for reliable voice communications within their cars even without their phone at hand or with them, and also benefit them by avoiding battery drain on their mobile devices.

The Foundry team prototyped a solution on a car's head unit by adding a Voice Over IP (VoIP) solution to the head unit using the data connection to be able to seamlessly leverage voice capabilities of an IMS network. The prototype could deliver voice services (based on the occupant's identity) to the car, and even support the option of having multiple users voice services available on the head unit.

Connecting these technologies within the car with an interface that was appropriate for a car was the primary goal of the prototype. For instance, they did not want drivers distracted by trying to manipulate a smartphone interface while driving. For this prototype, the efforts were focused on making the interface as seamless and effective as possible. Another key emphasis was to minimize the development effort to integrate with the IMS network as the primary goal was the experience, while preserving a quality voice experience.

To accomplish this, AT&T needed an SDK that quickly could integrate with other elements of the solution. The ability to expand over time to other IMS capabilities was also important for the choice of SDK for the prototyping work. A number of SIP SDKs were considered by the AT&T Foundry team.

Bria SDK

The AT&T Foundry team selected CounterPath's Bria SDK for the prototype project. Bria SDK takes the Bria client technology that is deployed on millions of devices worldwide and packages it for developers who are interested in creating individual or unified communications services within their own platforms. Bria SDK offers voice, messaging, presence, contact management capabilities to developers.

For AT&T's Foundry voice project, Bria offered a voice component and leveraged its efficient media engine that provides clear and reliable communications for users. CounterPath offers a range of voice codecs that developers can use depending on level of quality and bandwidth desired. The AT&T used a standard codec for prototype purposes.
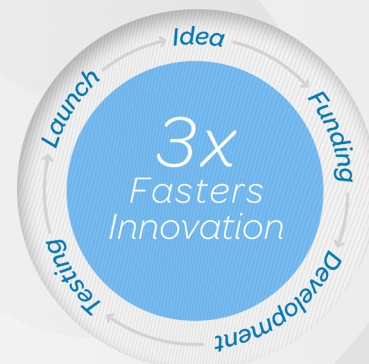
Bria SDK Continued

For interacting with the IMS network, Bria uses SIP. Bria is deployed in many of the largest IMS networks in the world. It has long track record of effectively working with IMS platforms from many providers.

Developers can easily integrate Bria and its SIP engine with their applications. The Core SDK uses C++, with wrappers available in Java or .NET. Mobile developers can use the mobile SDK for Android and iOS. The Bria SDK package comes with a comprehensive developer guide, sample application code and dedicated email support to ensure success in deploying SDK developed applications.

The Foundry team application developers used the Bria SDK for Android to integrate into the head unit software.

IMS
1-480-555-1234

Calls

PSTN

SIP

Bria leverages IMS mobile identity without the need of a mobile phone

Joanne Kemp
Incoming Call

Head Unit in Car

Joanne Kemp
Incoming Call

Decline   Answer

Smart Phone

Bria User

Key Points

- Bria user does NOT need a smartphone in the car
- Bria user can place and recieve calls using the same mobile number
- Bria registers to IMS via SIP

Results

The AT&T Foundry team successfully delivered its prototype within roughly 12 weeks. Yet the development effort to integrate the Bria SDK was only 1-2 days of effective work. With some smaller adjustments and the support from the CounterPath team, AT&T Foundry was able to generate reliable voice calls. Compared to other alternatives, the Bria SDK was much easier to work with and freed up team members to focus on other parts of the prototype.

Bria SDK provides a useful building block for future prototyping that the AT&T Foundry might pursue– with different communications services and integration into other non-traditional end points.

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