

# Technical Disclosure Commons

---

Defensive Publications Series

---

November 16, 2018

## Question and answer audio ads

Tuna Toksoz

John Dukellis

Follow this and additional works at: [https://www.tdcommons.org/dpubs\\_series](https://www.tdcommons.org/dpubs_series)

---

### Recommended Citation

Toksoz, Tuna and Dukellis, John, "Question and answer audio ads", Technical Disclosure Commons, (November 16, 2018)  
[https://www.tdcommons.org/dpubs\\_series/1653](https://www.tdcommons.org/dpubs_series/1653)



This work is licensed under a [Creative Commons Attribution 4.0 License](https://creativecommons.org/licenses/by/4.0/).

This Article is brought to you for free and open access by Technical Disclosure Commons. It has been accepted for inclusion in Defensive Publications Series by an authorized administrator of Technical Disclosure Commons.

## **Question and answer audio ads**

### **ABSTRACT**

With the advent of conversational smart assistants, users are increasingly spending time with screen-free devices and audio media. Advertisers want to effectively reach these users and engage with them, but they currently lack formats beyond traditional television and radio commercials.

This disclosure describes interactive audio ads tailored to the user interface of a conversational smart assistant. The audio ads feature questions posed by the advertiser and paths that the ad can follow based on user responses. With user consent, user responses are tracked such that they don't receive the same ad repeatedly. With user consent, user responses are accumulated such that the advertiser gains market insight.

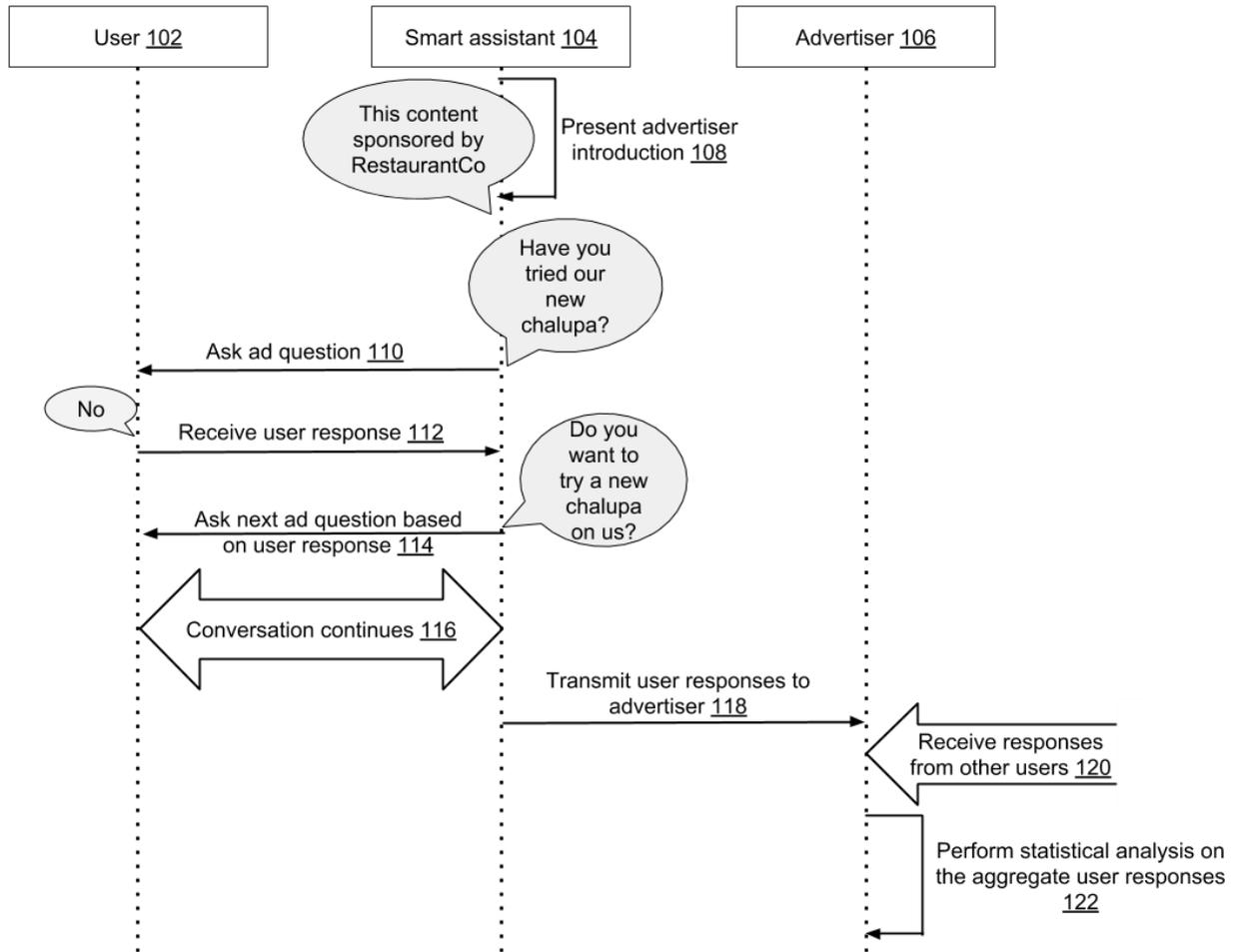
### **KEYWORDS**

Smart speaker; smart assistant; conversational assistant; virtual assistant; audio ads; sentiment analysis; interactive ads

### **BACKGROUND**

With the advent of conversational smart assistants, e.g., smart speakers, users are increasingly spending time with screen-free devices and audio media. Advertisers want to effectively reach these users and engage with them, but they currently lack formats beyond traditional television and radio commercials.

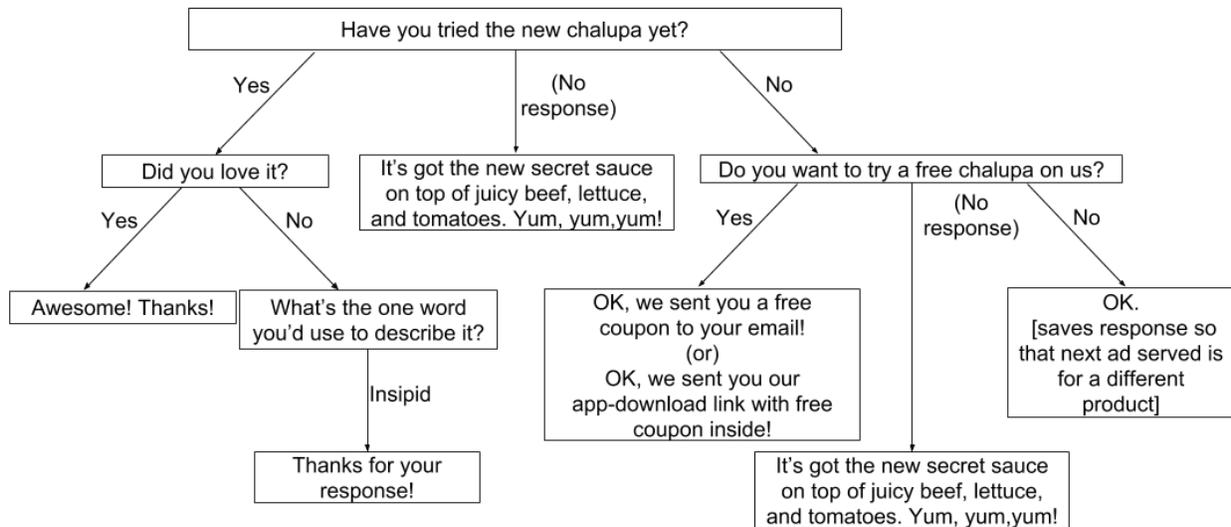
**DESCRIPTION**



**Fig. 1: Audio ad for conversational assistants**

Fig. 1 illustrates an example audio ad tailored for conversational assistants, per techniques of this disclosure. A user (102) is in recent interaction with a smart assistant (104), e.g., listening to a podcast, streaming audio content, etc. At an appropriate time, the smart assistant presents an introduction to the advertiser (108), e.g., by uttering “This content is sponsored by RestaurantCo.” The smart assistant asks an ad question (110), e.g., “Have you tried our new chalupa?” The smart assistant receives a user response (112), if any. A valid user response can be a null response, e.g., silence. The smart assistant asks another question (114)

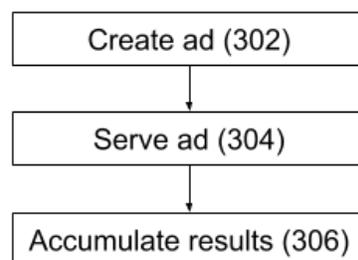
based on user response, e.g., “Do you want to try a new chalupa on us?” The next question posed by the smart assistant can be no question at all, e.g., if the user is silent, or if the smart assistant otherwise senses that the user is not currently disposed to answering ad questions. The ad conversation between user and smart assistant continues (116) to its natural end. With user permission, the smart assistant transmits user responses to the advertiser (118), who receives similar responses from other users (120) and performs statistical analyses on user responses (122) to gain market insight.



**Fig. 2: Graph of questions and answers in an audio ad**

Fig. 2 illustrates an example graph of questions and answers in an audio ad, per techniques of this disclosure. The text in boxes, e.g., nodes of the question-answer graph, are utterances (or actions) of the conversational smart assistant. The labels beside the links of the question-answer graph are potential responses by a user. The yes/no branches are indicative of user sentiment, e.g., a “no” branch represents negative sentiment in the different ways a user might express it, e.g., “no”, “no way”, “it was terrible”, “it sucked”, “not going there again”, etc. With the user’s permission, the user’s responses are tracked so that an indication that the user

does not want to hear the ad again is noted. Such indication can be explicit or standardized, e.g., the user might say, “I’ve already heard this ad.” Such indication can be implicit, e.g., a lack of response from the user to questions, a sequence of negative responses from the user, etc. If the smart assistant senses that the user does not want to hear the ad, it may suppress the ad or move on to a different ad. In this manner, the path followed by an audio ad depends on the user’s responses.



**Fig. 3: Lifecycle of an audio ad**

Fig. 3 illustrates the lifecycle of an audio ad, per techniques of this disclosure. An audio ad is created (302) that has a linked set of decision points following questions, as explained before. The advertiser can record the ad in voice (or music) that is selected by them. Alternately, the advertiser can supply written text, and the publisher can choose the style for the ad. For example, a publisher may utter the ad in the voice of a celebrity, or may choose a cadence that is e.g., informal, formal, old, young, quiet, excited, etc. The publisher can choose a style, e.g., that matches the style of the podcast. The publisher can use machine-learned artificial speech synthesizers to deliver the ad such that it simulates closely a human speaker.

At 304, the ad is served to the user. The serving of the ad can be done real-time on the device. Alternately, it can be done using audio files that are generated and delivered to the device ahead of time, and triggered at the appropriate moment. During the serving of the ad, user responses are tracked with user permission such that they don’t repeatedly hear the same ad.

At 306, results are accumulated for the advertiser across the user base. Results can include, e.g., how many ads were served, how many users engaged, the answers to the individual questions of the ad, whether follow-up action suggested by the ad (install app, open email or text message containing coupon, etc.) was carried out by the user, etc. An advertiser can use such results in various ways to gain market insight, e.g., matching an audio ad to consumer actions such as the redemption of a free coupon, etc.

Further to the descriptions above, a user may be provided with controls allowing the user to make an election as to both if and when systems, programs or features described herein may enable collection of user information (e.g., information about a user's social network, social actions or activities, profession, a user's preferences, or a user's current location), and if the user is sent content or communications from a server. In addition, certain data may be treated in one or more ways before it is stored or used, so that personally identifiable information is removed. For example, a user's identity may be treated so that no personally identifiable information can be determined for the user, or a user's geographic location may be generalized where location information is obtained (such as to a city, ZIP code, or state level), so that a particular location of a user cannot be determined. Thus, the user may have control over what information is collected about the user, how that information is used, and what information is provided to the user.

## CONCLUSION

This disclosure describes audio ads tailored to the user interface of a conversational smart assistant. The audio ads feature questions posed by the advertiser and paths that the ad can follow based on user responses. With user consent, user responses are tracked such that they don't receive the same ad repeatedly. With user consent, user responses are accumulated such that the advertiser gains market insight.

