

# Proposal for Cooperation on AI Personalization Service Technology through Multi-Voice System Patent

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"With Google, experience the world in the voice you desire."

Recent advancements in AI and voice recognition technology are transforming all aspects of our lives. Particularly, the controversy surrounding OpenAI's 'GPT-4' mimicking actress Scarlett Johansson's voice has garnered global attention. As AI becomes more of a reality than a fictional story, we are entering a new era of possibilities.

Google's 'Google Assistant' is at the heart of this change. As the leader in AI speakers worldwide, Google is poised to dominate the converging media landscape of the hyper-personalized generative AI era.

Users will increasingly seek new services that combine a variety of voices. We are confident that Google and Sundar Pichai, as icons of innovation and challenge, are at the center of this transformation.

Google has maximized user convenience through technological innovation, establishing a leading position in the global market. We are well aware that Google plays a leading role in the field of voice recognition and synthesis technology and is continuously striving to stay ahead in the ongoing AI competition. To secure a leading position against fierce competitors like OpenAI, Amazon, Microsoft, and Meta Platforms, we possess a crucial patent that can enhance your technology portfolio and provide innovative services.

## Patent Information

- **Patent Title:** Multi-voice system for online media service implementation
- **U.S. Patent Number:** US11,521,593 B2
- **Japan Patent Number:** JP7262142
- **Korea Patent Number:** 10-2111360
- **Filing Date:** May 20, 2020
- **Registration Date:** April 13, 2023

## Patent Description

This patent concerns a method for implementing a multi-voice system that allows subscribers to select and listen to online articles and content in the voices of various individuals on different online content platforms.

## Technical Concept

1. **Predefined Online Article and Content Collection:**Collects articles and content from specific media sites and displays them on personal device screens.
2. **Subscriber Voice Setting:**Allows subscribers to input their voice or select a specific person's voice from a pre-stored database.
3. **Article and Content Recognition and Classification:**Recognizes and classifies online articles and content.
4. **Voice Conversion:**Converts classified online articles and content into voice.
5. **Voice Output:**Outputs articles and content in the set subscriber's or a specific person's voice.
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Through this, users can listen to digital content in the voice they desire.

## Economic Synergy

### Google Assistant

**Increased user engagement and new subscriber acquisition through personalized voice services, generating over \$100M in additional annual revenue**

- **Specific Method:**Google Assistant can offer users a variety of voice options. For example, users can set Assistant to their own voice, their favorite actor's voice, or a family member's voice. To achieve this, Google will utilize user-customized AI multi-voice service technology to add various voice models to the database and implement a user interface that allows easy voice changes.
- **Rationale:**Personalized user experiences greatly enhance user satisfaction and engagement. Personalized services induce continuous use by users, leading to increased retention rates and new user acquisition. Studies show that services providing personalized experiences see an average increase in user retention rates of over 20%.
- **Business Direction:**
  - **Introducing Premium Subscription Models:**Offer the personalized voice feature as part of a premium subscription service, converting existing free users to paid subscribers. For example, users would pay a monthly subscription fee to change to a famous voice in the basic free service.
  - **Operating a Voice Store:**Run a platform where users can download or purchase voices of their favorite celebrities, characters, or customized voices. Users can diversify and personalize their Assistant voice, leading to additional revenue generation.
  - **Increasing Advertising Revenue:**Collect better user data through personalized voices and provide targeted advertisements based on this data to increase ad revenue. For instance, delivering personalized ads in voice based on user profiles can induce higher click rates.

## Google Home and Nest Devices

Enhancing user experience through personalized voice features, expected to generate over \$60M in additional annual revenue

- **Specific Method:** Allow user-specific personalized voice profiles on Google Home and Nest devices. By enabling each family member to control the device with different voices, user convenience can be significantly improved. To achieve this, Google will add a voice profile setting feature and provide options for users to select familiar voices.
- **Rationale:** Personalized voice features enhance the attractiveness of smart home devices, leading to increased sales. The smart home market grows at an annual rate of over 15%, and personalized features act as differentiators that can drive sales.
- **Business Direction:**
  - **Offering Family Packages:** Introduce packages that provide personalized voices for all family members, encouraging additional device sales and subscription services. For example, a family package allows each family member to set up their own voice profile.
  - **Joint Marketing:** Partner with appliance manufacturers to launch joint marketing campaigns that emphasize the personalized voice features of Google Home and Nest devices. For example, selling Google Home bundled with appliances to provide a comprehensive smart home experience and drive sales.
  - **Linking New Services:** Expand subscriber-based services by adding home automation services through personalized voice features (e.g., personalized voice for security alerts, schedule reminders). For example, users would pay a monthly subscription fee to access various personalized voice features.

## YouTube

Enhancing user experience through personalized narration, generating over \$60M in additional annual revenue

- **Specific Method:** Introduce personalized narration features in YouTube content, allowing users to watch videos in their preferred voices. For example, users can set narration to the voice of their favorite YouTuber or actor. Google will implement this by utilizing user-customized AI multi-voice service technology to offer a variety of voice options and improve the user interface for easy selection.
- **Rationale:** Personalized narration enhances user immersion, increasing watch time and advertising revenue. Studies show that immersive content increases watch time by an average of over 25%, significantly boosting ad revenue.
- **Business Direction:**

- **Premium Content Subscription:** Offer personalized narration as part of premium subscription content, encouraging users to switch to paid subscription services. For example, listening to narration in a celebrity's voice would require a YouTube Premium subscription.
- **Sponsorship and Brand Collaboration:** Enhance sponsorship programs and brand collaborations by utilizing personalized narration with celebrity voices. For example, partnering with specific brands to provide brand-related content in a celebrity's voice.
- **Customized Advertising:** Provide targeted advertisements through personalized narration by understanding user interests and preferences, maximizing ad revenue. For example, delivering relevant ads in personalized narration when users watch videos on specific topics.

## Google Maps

**Providing personalized navigation voice guidance, increasing user satisfaction, generating over \$40M in additional annual revenue**

- **Specific Method:** Google Maps offers users personalized navigation voice guidance options. Users can receive navigation guidance in their preferred voices, enhancing the driving experience. Google will add various voice options and introduce a user interface feature that allows easy voice selection.
- **Rationale:** Personalized voice guidance increases user satisfaction and frequency of Google Maps use, boosting advertising and service revenue. High user satisfaction leads to an average increase in reuse rates of over 20%, which translates to increased ad revenue.
- **Business Direction:**
  - **Premium Navigation Services:** Provide personalized voice guidance as part of premium navigation services, encouraging paid subscriptions. For example, receiving navigation guidance in a celebrity's voice would require a monthly subscription fee.
  - **Voice Guidance Ads:** Insert location-based ads during personalized voice guidance to generate ad revenue through partnerships with local businesses. For example, offering personalized voice ads for shops or restaurants in specific areas as users pass through.
  - **Customized Tourist Guides:** Provide premium guides for tourists through personalized voice guidance services, generating additional revenue. For example, offering paid services to hear tourist site explanations in a celebrity's voice.

## Google Cloud

### Increased revenue through licensing and cloud services for multi-voice system technology, generating over \$100M in additional annual revenue

- **Specific Method:** Google Cloud licenses multi-voice system technology to various industries and offers it as a cloud service. For example, customer service centers, healthcare, and education sectors can provide personalized voice services to improve customer interaction quality. Google will offer multi-voice system technology as a cloud-based API, supporting easy integration for businesses.
- **Rationale:** Demand for multi-voice system technology is increasing across various industries, and providing it as licensing and cloud services can generate additional revenue. The cloud-based voice service market grows at an annual rate of over 20%, and personalized voice services enhance customer service quality, leading to cost savings and revenue increases.
- **Business Direction:**
  - **Providing B2B Solutions:** Offer multi-voice system technology as B2B solutions for use in customer service centers, healthcare institutions, education institutions, etc. For example, customer service centers can provide personalized voice interactions to enhance customer satisfaction.
  - **Cloud-based API Platform:** Offer multi-voice system technology as a cloud-based API, supporting easy integration for various businesses. For example, enabling businesses to implement personalized voice features easily through the Google Cloud API.
  - **Customized Voice Data Services:** Provide customized voice data services tailored to specific industries, helping businesses implement customer-specific services. For example, offering personalized health information based on patient voices in the healthcare sector.

## Additional Revenue Generation: Patent Licensing

### Licensing Revenue

#### Generating over \$100M in additional annual revenue through patent licensing and royalties

- **Specific Method:** If Google holds an exclusive license for this patent, it can license it to other companies and generate royalty revenue. This could be an attractive proposition, especially for companies that use multi-voice system technology.
- **Rationale:** Multi-voice system technology is highly applicable across various industries, and many companies are interested in using it. Through patent licensing, Google can secure continuous royalty revenue.
- **Target Companies:** Companies currently using multi-voice system technology

include Eleven Labs, Naver, and AI-based voice technology startups.

- **Eleven Labs:**A company using multi-voice system technology, generating additional revenue through patent licensing.
- **Naver:**A major internet company in Korea, using multi-voice system technology to offer various services. Licensing cooperation with Naver can secure royalty revenue.
- **OpenAI:**A company using AI voice technology, generating additional revenue through patent licensing.
- **Other Startups:**Provide licensing to various startups using AI-based voice technology to generate additional revenue.

## Additional Business Areas

**Generating over \$50M in additional annual revenue through the development of new personalized voice services**

- **Specific Method:**Develop new personalized voice services applicable to various fields such as education, healthcare, and smart homes. For example, providing learning content in voices preferred by students in the education sector, and delivering health information in voices preferred by patients in the healthcare sector. Google will develop voice services and interfaces specialized for each field, offering personalized experiences to users.
- **Rationale:**Personalized voice services significantly enhance user experience in each field, creating new markets and generating additional revenue. For example, providing personalized learning content in the education sector increases student learning effectiveness by an average of over 30%, enhancing the value and revenue of educational services.
- **Business Direction:**
  - **Personalized Education Services:**Partner with educational platforms to offer personalized education services where students can learn in their preferred voices. For example, partnering with educational content providers to develop personalized voice learning content and offering it as a subscription-based service.
  - **Healthcare Personalized Voice Services:**Collaborate with healthcare institutions to develop personalized voice services delivering health information in preferred voices. For example, partnering with hospitals to allow patients to receive treatment plans and health information in personalized voices.
  - **Smart Home Expansion:**Strengthen integration with smart home devices to provide home automation services through personalized voices and expand subscription-based smart home services. For example, collaborating with smart home solution providers to add personalized voice control features.

# Advantages Google Can Gain from Patent Cooperation

## Google Assistant

- **Providing Personalized Voice Experiences:** Respond to users with different voices, enhancing user satisfaction and engagement. For example, users can set Google Assistant to their own voice, favorite actor's voice, or a family member's voice.
- **Strengthening Competitive Edge:** Gain an edge over competitors like Amazon Alexa, Apple Siri, Microsoft Cortana, and OpenAI.

## Google Home and Nest Devices

- **Smart Home Integration:** Control smart home devices with various voices, creating a more natural and human-like smart home environment. This enhances the attractiveness of smart home devices, leading to increased sales.
- **Enhancing User Convenience:** Improve user convenience through voice settings for each family member, providing personalized experiences.

## YouTube

- **Introducing Personalized Narration Features:** Offer the ability to watch content in preferred voices, providing an immersive viewing experience. This increases user satisfaction and watch time, boosting ad revenue.
- **Strengthening Multilingual Support:** Use this patent to enhance multilingual narration features, providing better services to global users.

## Google Maps

- **Personalized Navigation Voice Guidance:** Provide navigation guidance in preferred voices, improving the driving experience.
- **Strengthening Voice Command Features:** Enhance voice command features with more natural and diverse voices, making Google Maps more convenient for users.

## Google Cloud

- **Providing Multi-Voice System Services:** Use this patent to strengthen Google Cloud's multi-voice system services. Various industries can adopt this technology to offer personalized voice services in customer service, education, healthcare, etc.
- **Licensing and B2B Business Model:** Google can license this technology to other companies, generating additional revenue.

## Risk Factors If Google Does Not Engage in Patent Cooperation

### Economic Losses

- **Loss of Market Share:** If competitors license this patent to implement personalized voice services, Google's services could fall behind in the competition. This may lead to user attrition and a decline in new sign-ups, potentially resulting in revenue losses of several billion won annually.
- **Loss of Licensing Revenue:** If competitors acquire this patent and monopolize multi-voice system technology, Google would not only miss out on licensing revenue but also potentially have to pay royalties to competitors.
- **Reduction in Advertising Revenue:** The potential additional revenue from personalized voice ads would decrease, leading to over \$60M in annual losses.
- **Loss of Expected Revenue:** Google would miss out on the expected annual additional revenue of over \$510M that this patent could bring. This includes revenue increases in Google Assistant, YouTube, Google Maps, Google Cloud, etc.

### Brand Damage

- **Loss of Technological Leadership:** Losing leadership in multi-voice system technology could negatively impact Google's brand trust and loyalty. Competitors gaining technological superiority could weaken Google's brand image.
- **Decrease in User Satisfaction:** Users might switch to more innovative and personalized experiences offered by competitors' products, reducing user satisfaction and brand loyalty.

### Weakening Competitiveness

- **Deterioration of Service Quality:** If competitors offer superior services utilizing personalized voice technology, Google's services could become relatively inferior, significantly weakening market competitiveness.
- **Increased Costs:** If Google needs to pay royalties to competitors, additional costs would arise.

### Additional Risks

- **Decreased Innovation:** Missing out on innovative multi-voice system technology could diminish Google's internal innovation capabilities, negatively impacting long-term technology development and service improvement.
- **Weakening Global Competitiveness:** Google's global competitiveness could decline, making it difficult to maintain and expand the global user base. This



- could result in billions of dollars in global revenue losses annually.
- **Increased Market Entry Barriers:**Competitors raising market entry barriers through this patent could make it more challenging for Google to launch new services and expand the market, limiting long-term growth potential.
- **Increased Legal Dispute Costs:**Legal dispute costs could rise if patent disputes with competitors arise.

## Expected Additional Revenue Summary

Item	Expected (Annual)	Additional	Revenue
Google Assistant	\$100M		
Google Home and Nest Devices	\$60M		
YouTube	\$60M		
Google Maps	\$40M		
Google Cloud	\$100M		
Development of New Personalized Voice Services	\$50M		
Patent Licensing Revenue	\$100M		
<b>Total Expected Additional Revenue (Annual)</b>	<b>\$510M</b>		

## Conclusion

By licensing this patent, Google can narrow the technology gap with competitors, increase revenue in various application fields, and expand its influence in the global market.

We propose that Google license this important patent to strengthen its multi-voice system technology portfolio and provide innovative services.

The reasons for Google to cooperate on this patent are clear:

1. **Strengthening Competitiveness:**Secure a technological edge over major competitors like Amazon Alexa, Apple Siri, Microsoft Cortana, and OpenAI, establishing Google as the leader in multi-voice system technology.
2. **Economic Benefits:**Generate over \$510M in additional annual revenue through personalized voice features across various Google services (Google Assistant, YouTube, Google Maps, Google Cloud, etc.).
3. **Increasing Brand Value:**Enhance Google's brand trust and loyalty, maximizing user satisfaction.
4. **Maintaining Market Leadership:**Retain market leadership through personalized voice services, preventing competitors from surpassing Google's technology.
5. **Expanding Global Influence:**Expand the global user base and showcase Google's technological prowess worldwide.
6. **Legal Protection and Revenue Generation:**Generate additional revenue

through patent licensing and strengthen legal protection by preventing competitors from adopting the technology.

If Google does not cooperate on this patent, there is a risk that competitors may leverage the technology to offer innovative services that surpass Google's offerings. This could seriously impact Google's market share and revenue, and negatively affect brand value and user satisfaction.

Therefore, by licensing this patent, Google can secure technological, economic, and strategic advantages, ensuring long-term growth and prosperity for the company.

Thank you.