

# Nipping Inaccessibility in the Bud: Opportunities and Challenges of Accessible Media Content Authoring

WebSci'21 AAI workshop

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# Context – User-generated content

- User-generated content is a large part of the content available on the web
- Social networks are the source of a large part of that content, including images and videos

# Context – Social networks

- Social networks (their interface) are fairly accessible
- But their media content is not!
  - Even if some platforms are providing automated textual descriptions

# Accessible content authoring barriers and motivations

- Users are **not aware** they can create accessible content
- Social platforms provide **no guidance**
- **Stigma** associated with disability
- Users **want** to be inclusive

# Objectives

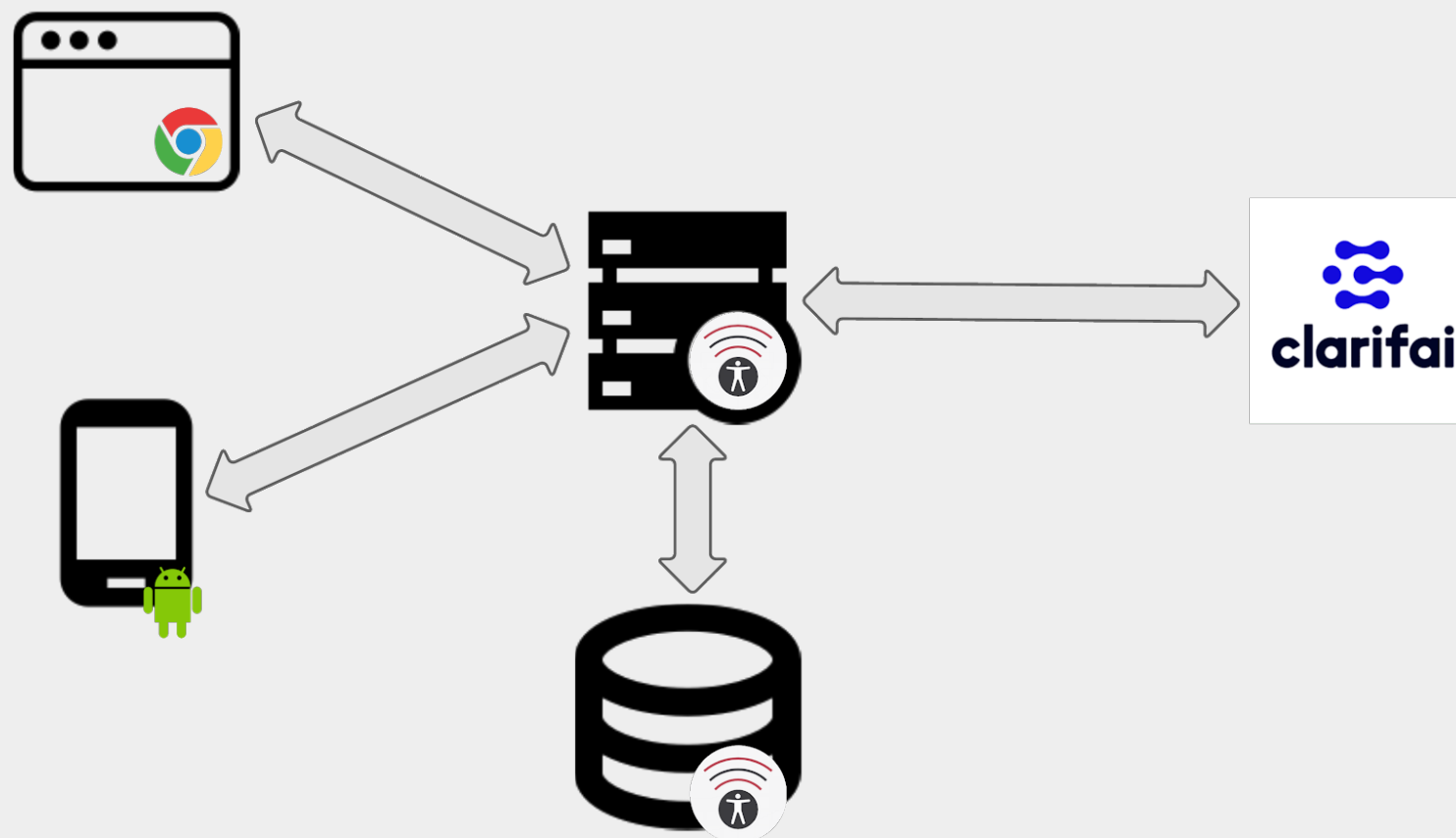
The structure deployed in SONAAR explores a human-in-the-loop and collaborative approach to:

1. Better assist mainstream users in the authoring process of accessible media content;
2. Improve the general quality of images descriptions in social networks;
3. Raise accessibility awareness of social network users;
4. Discuss the benefits and feasibility of mixed approaches.

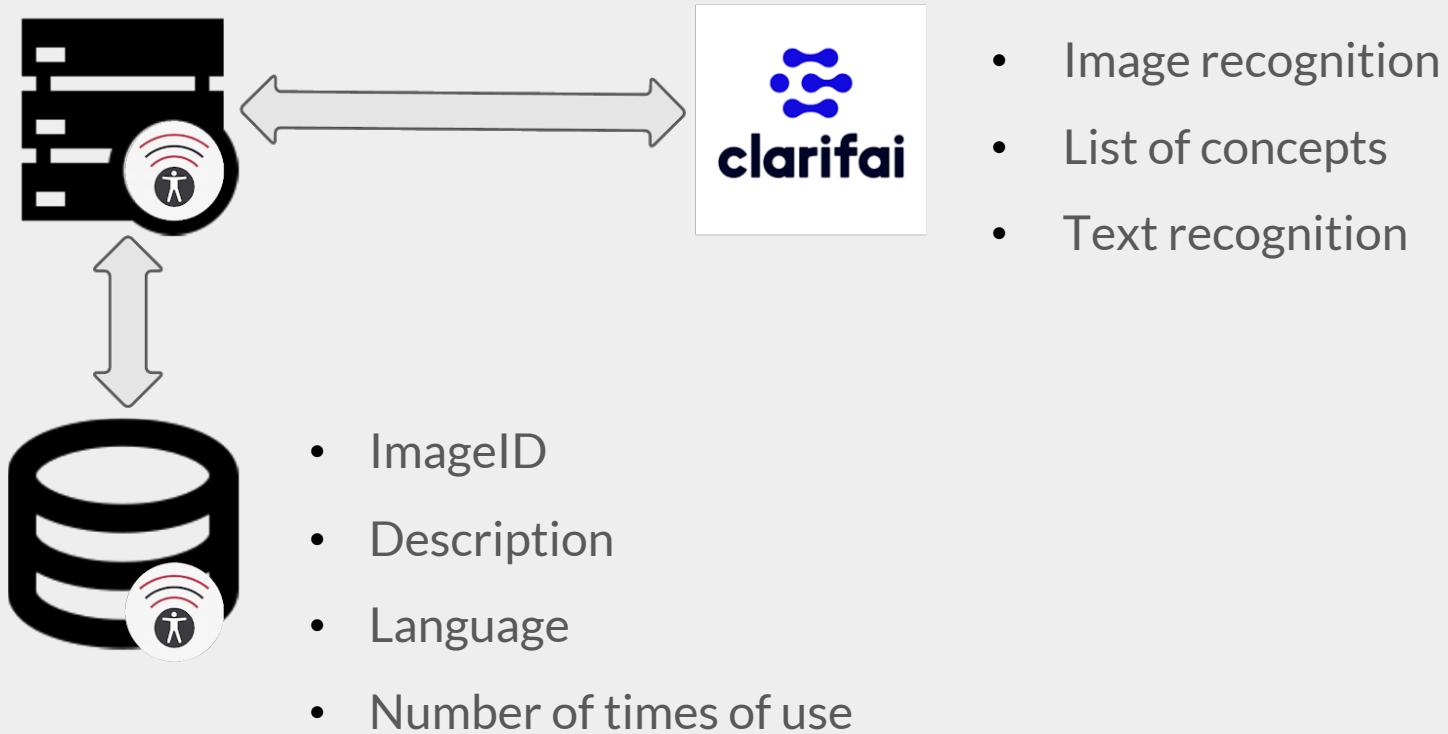
# SONAAR

- Platforms
  - Google Chrome extension
  - Android application
- Social Networks
  - Twitter
  - Facebook
- Offers text alternative
  - When authoring
  - On request when browsing

# SONAAR



# SONAAR Backend

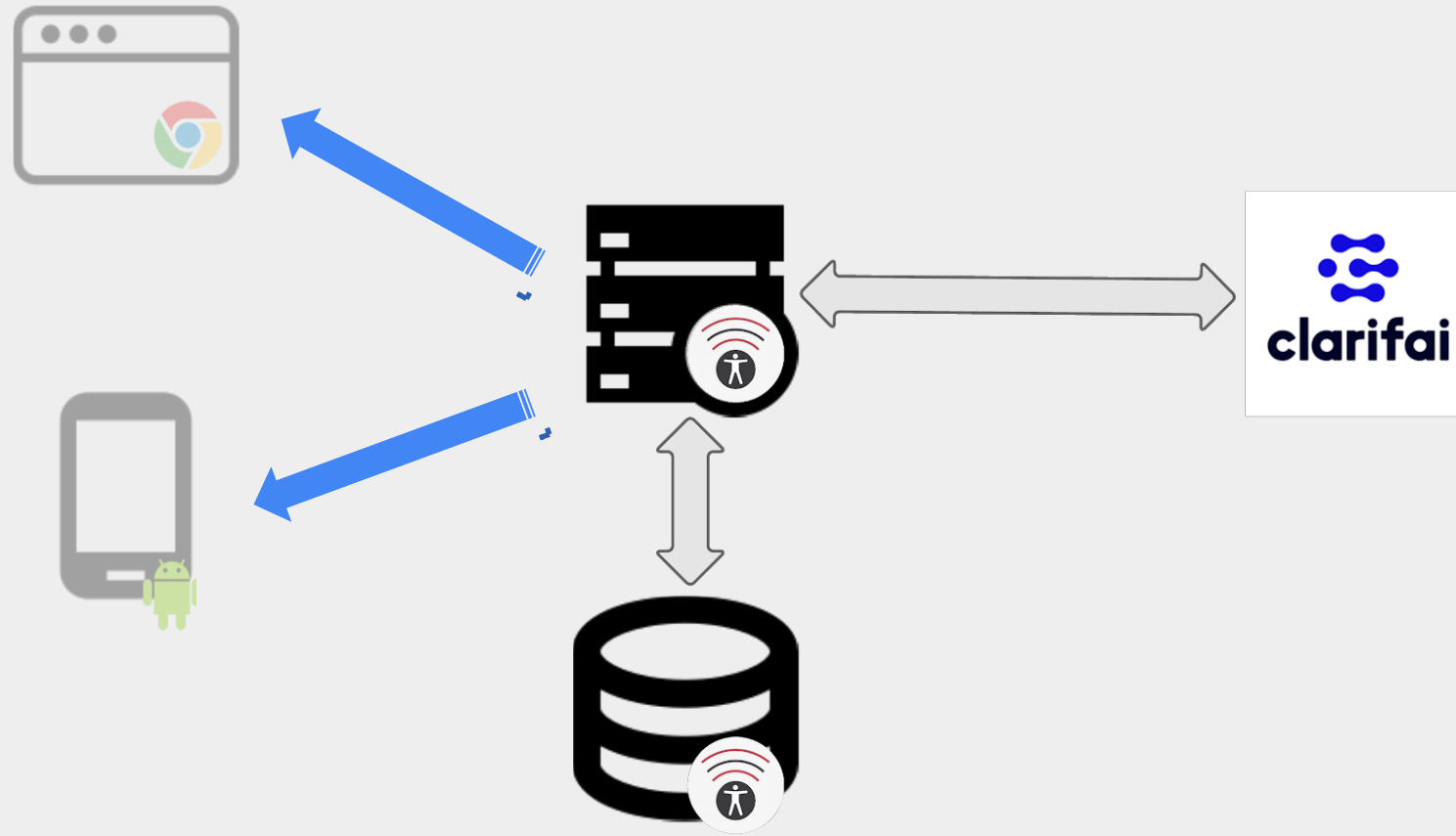




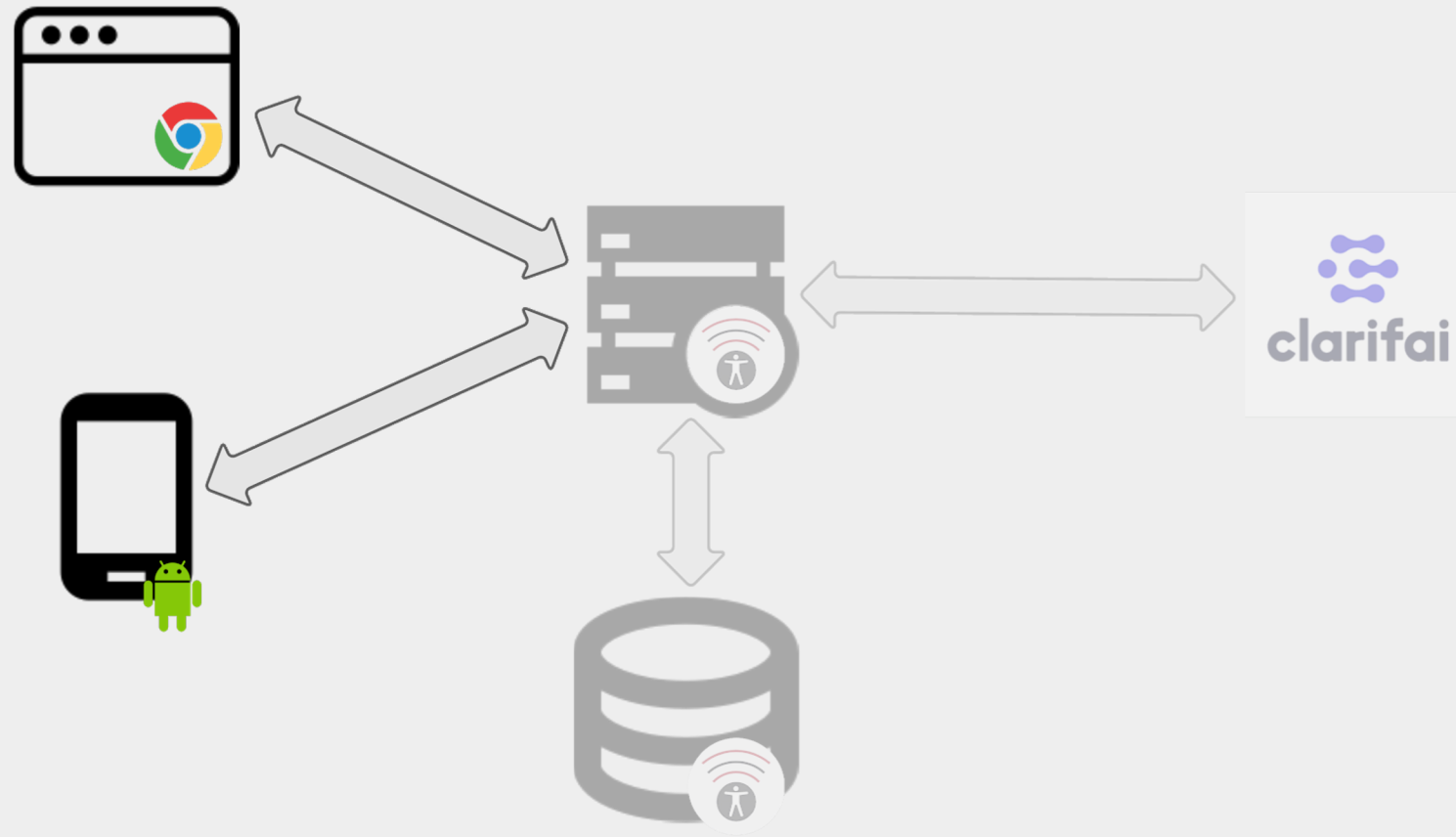
# SONAAR Backend

- Different sources of alternative descriptions
  - List of concepts
  - Text recognition
  - Alternative descriptions provided for the same image by other users

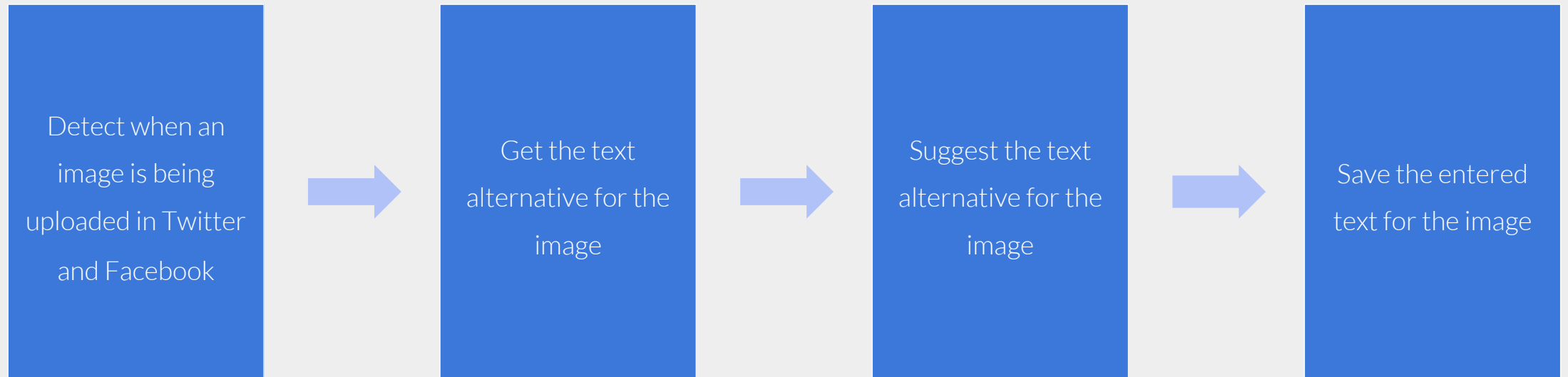
# SONAAR Backend

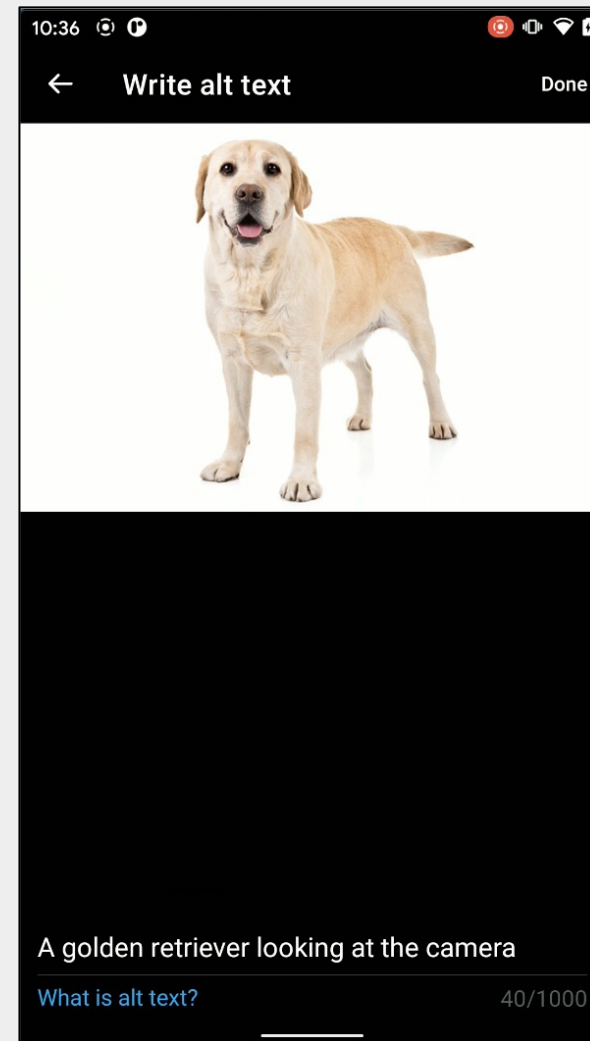
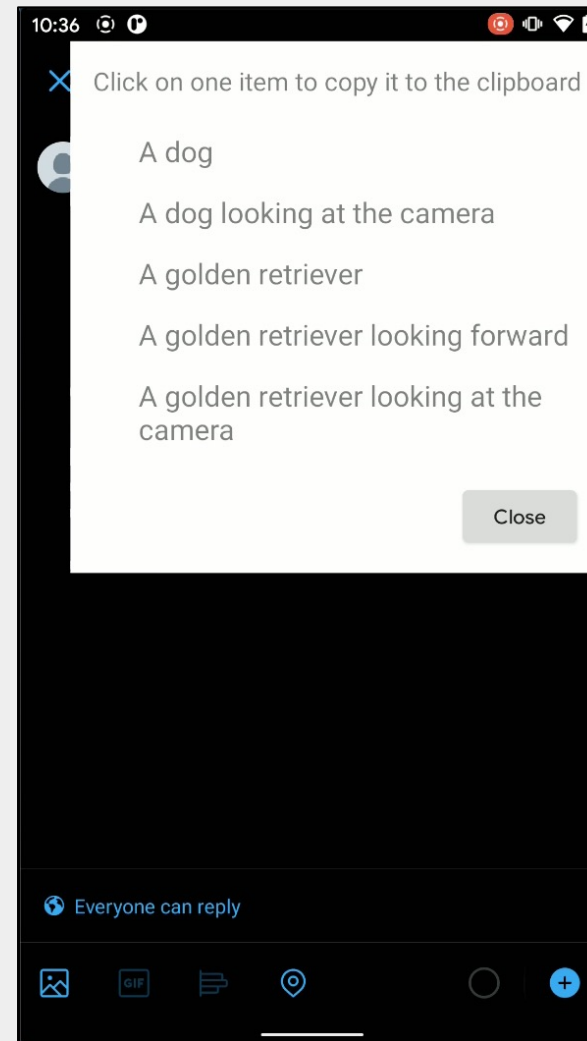
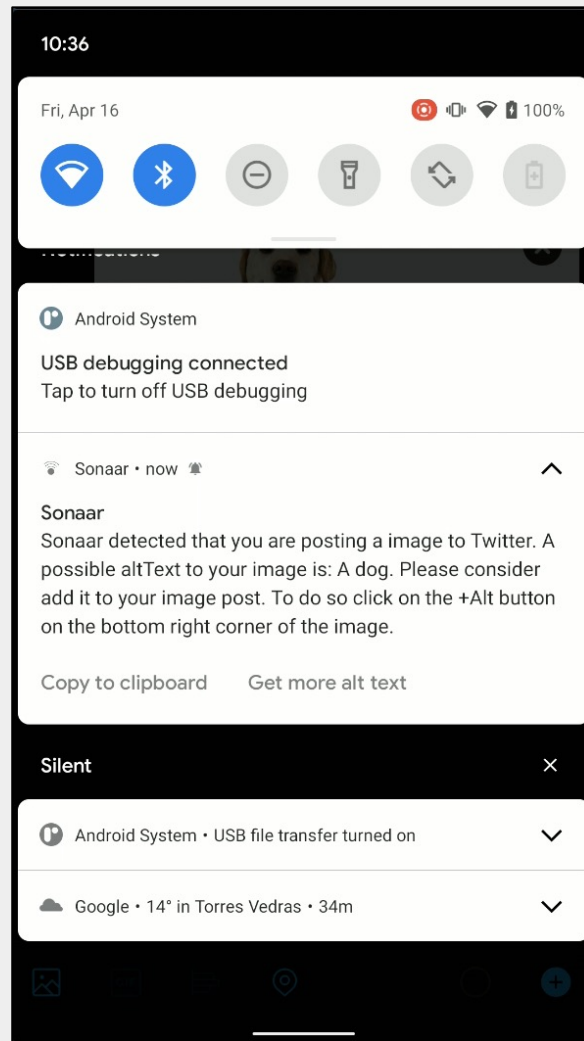
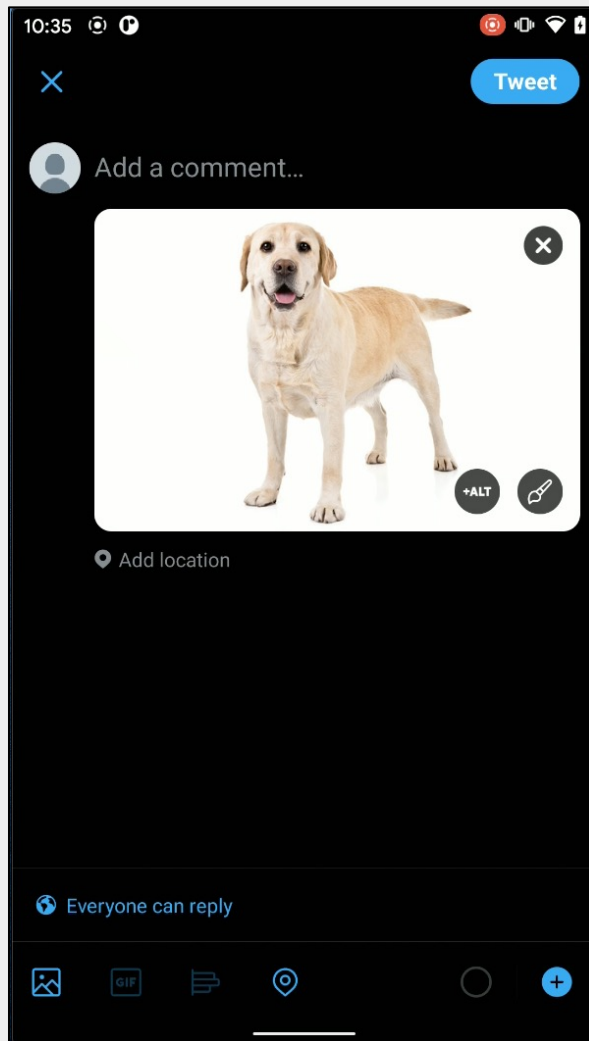


# SONAAR Frontend

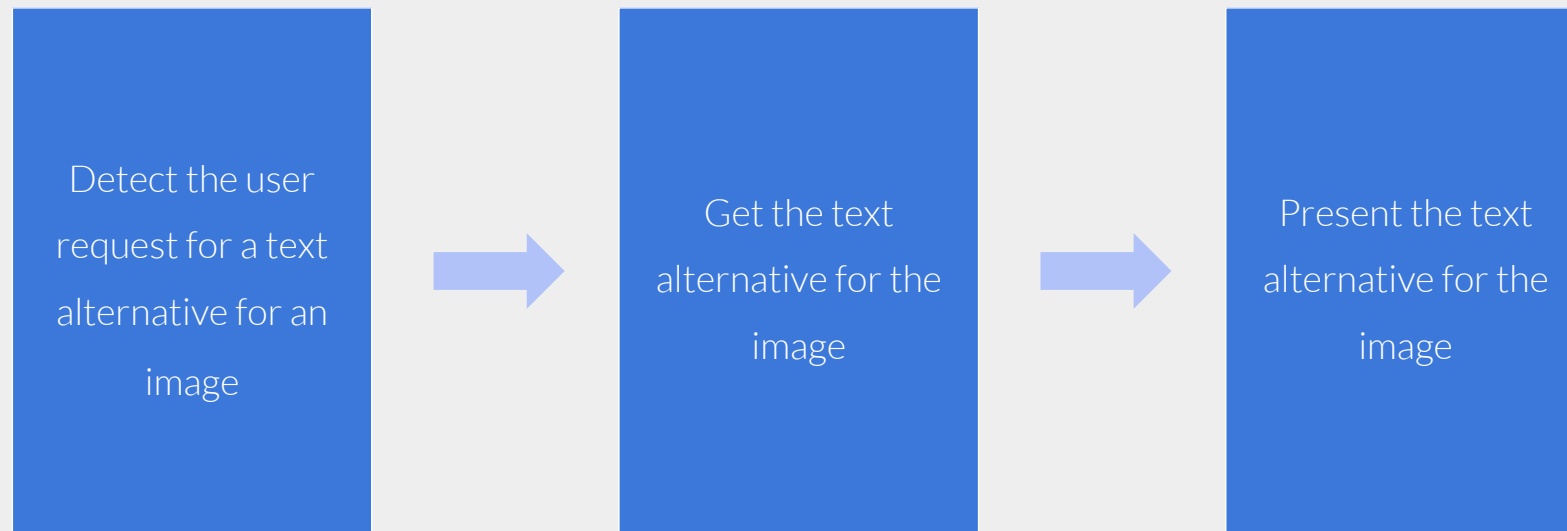


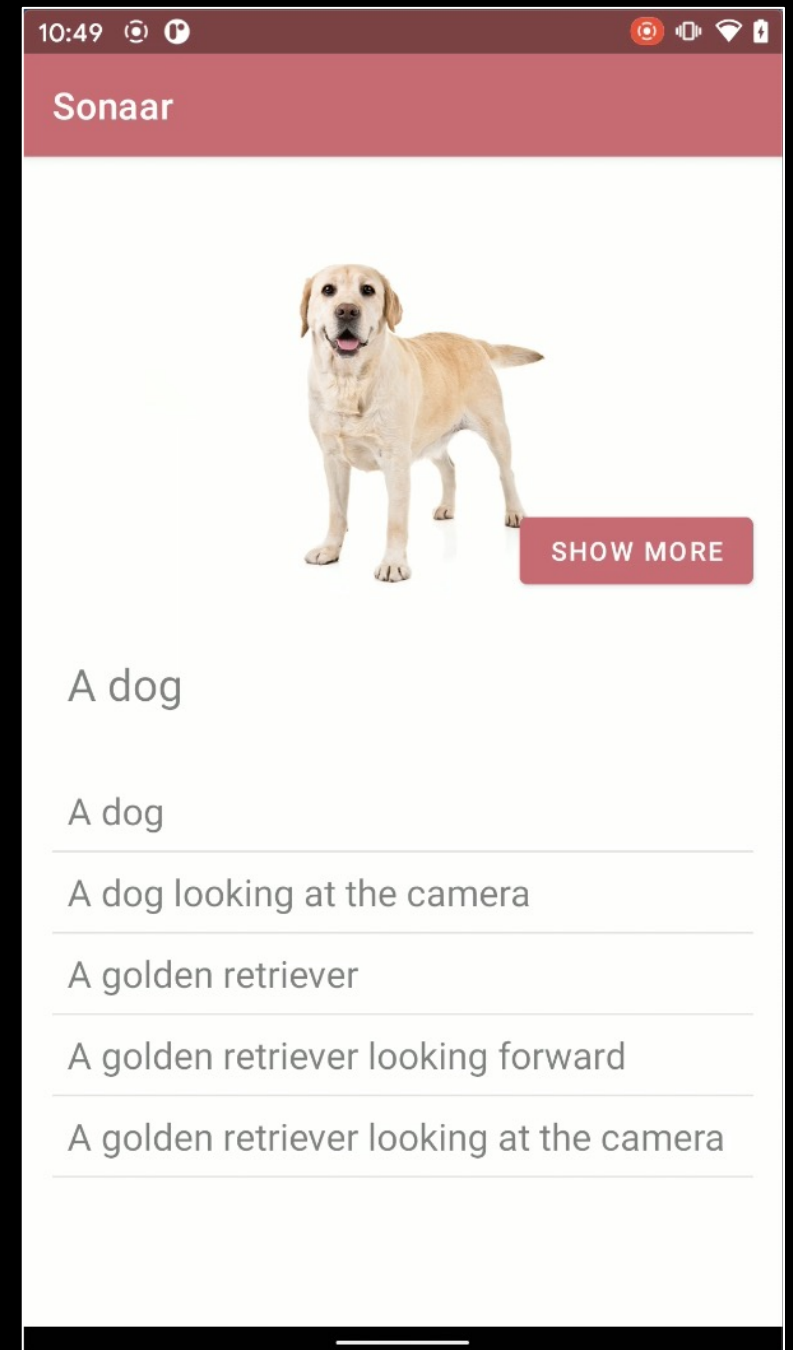
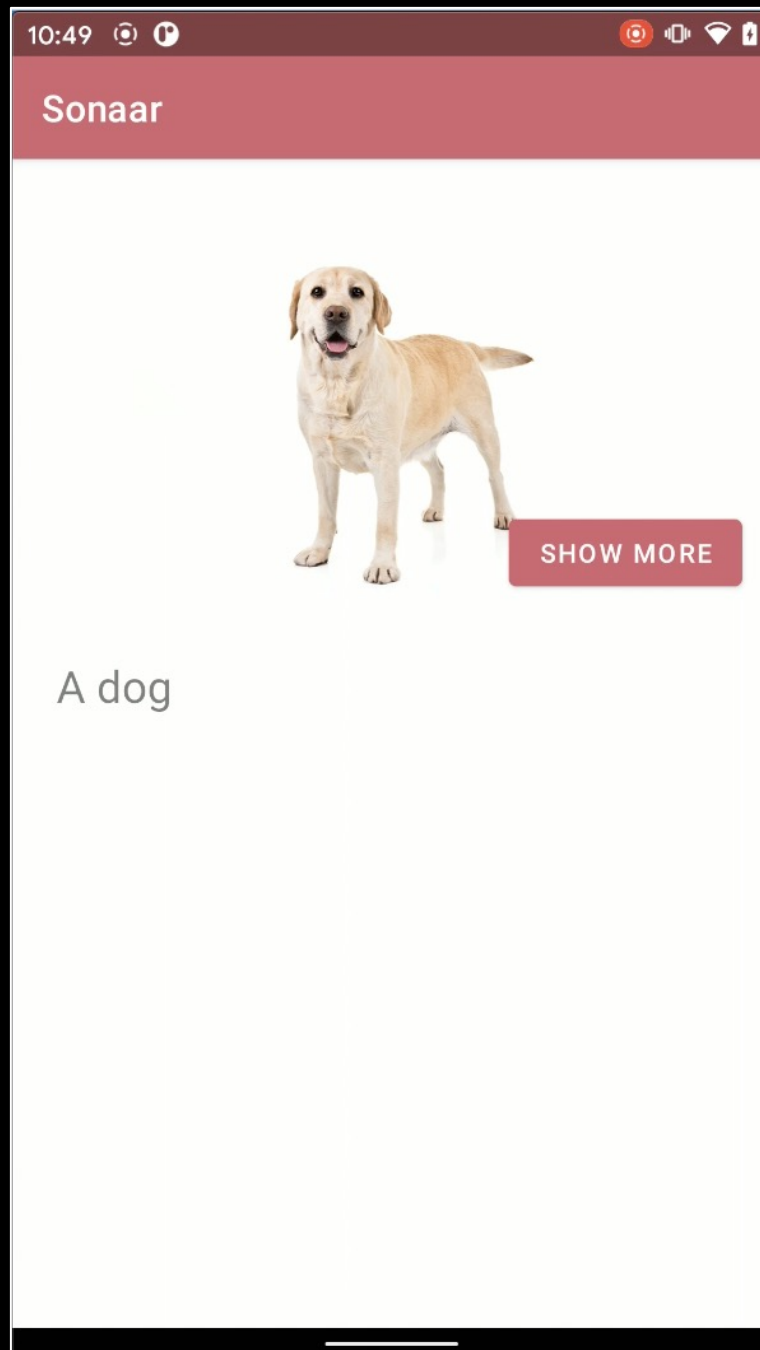
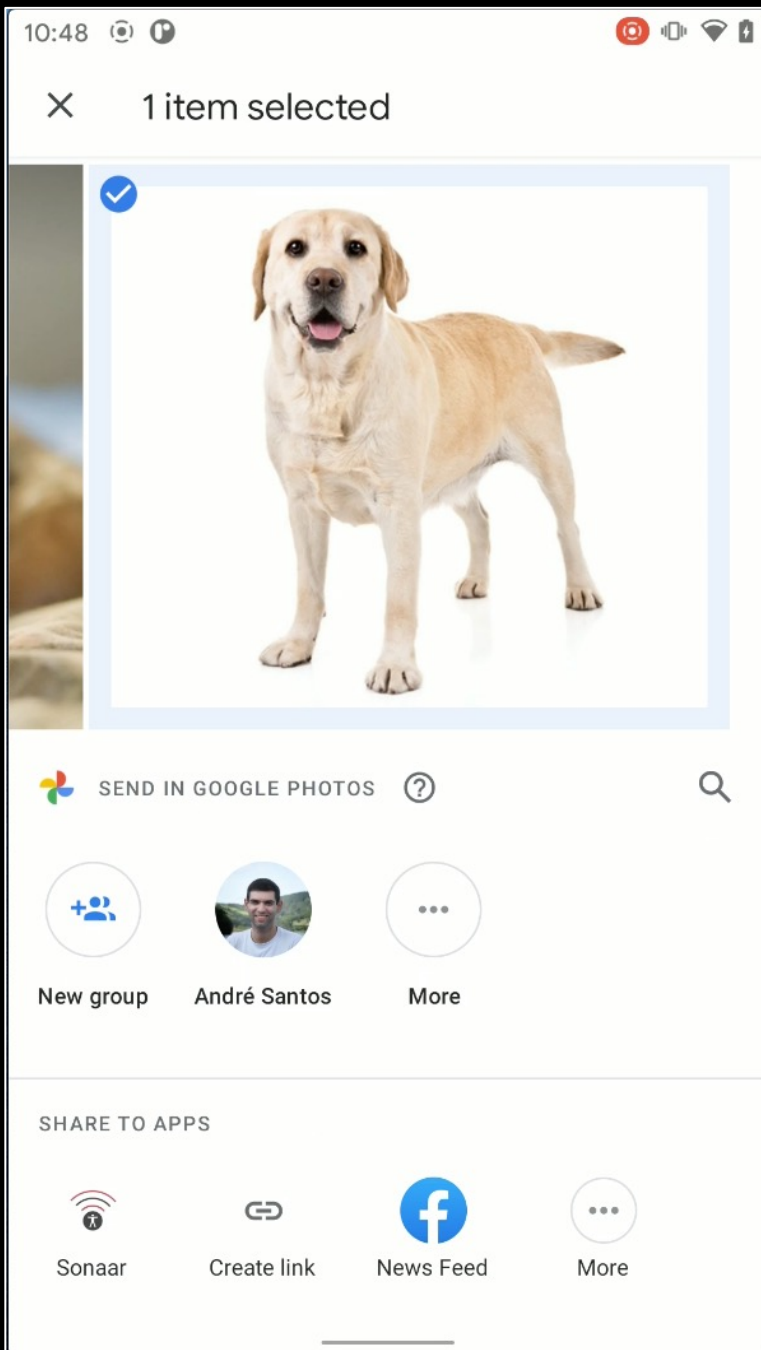
# Authoring accessible content





# Consuming accessible content





# Opportunities

- Raise awareness and educate users
- Reduce user effort
- Improve both automated and human-authored descriptions
- Leverage collaborative/community efforts
- Automatic descriptions to engage users



# Challenges

- Depend on an external source
- Frequent changes in the UI of social networks
- Dealing with UI changes manually
- Dealing with UI changes automatically
- Seamless expansion to other social platforms
- Dealing with different languages
- Ensure user privacy at all times

# Conclusion

In SONAAR we explore a solution that :

- Promotes the authoring of accessible content by raising awareness, and supports authoring by suggesting possible descriptions for an image
- Explores how hybrid solutions, combining human authoring with AI supported automatic generation and classification, can contribute to improve the overall accessibility of web content


# Thank you!

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<http://di.fc.ul.pt/~cad/SONAAR/>

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