

A Secondary Screen Architecture to Accurately Capture Viewers' Interactions in an iTV Environment

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Agenda

- Motivation
- Second Screen Architecture
- Why is it Interesting?
- Conclusion

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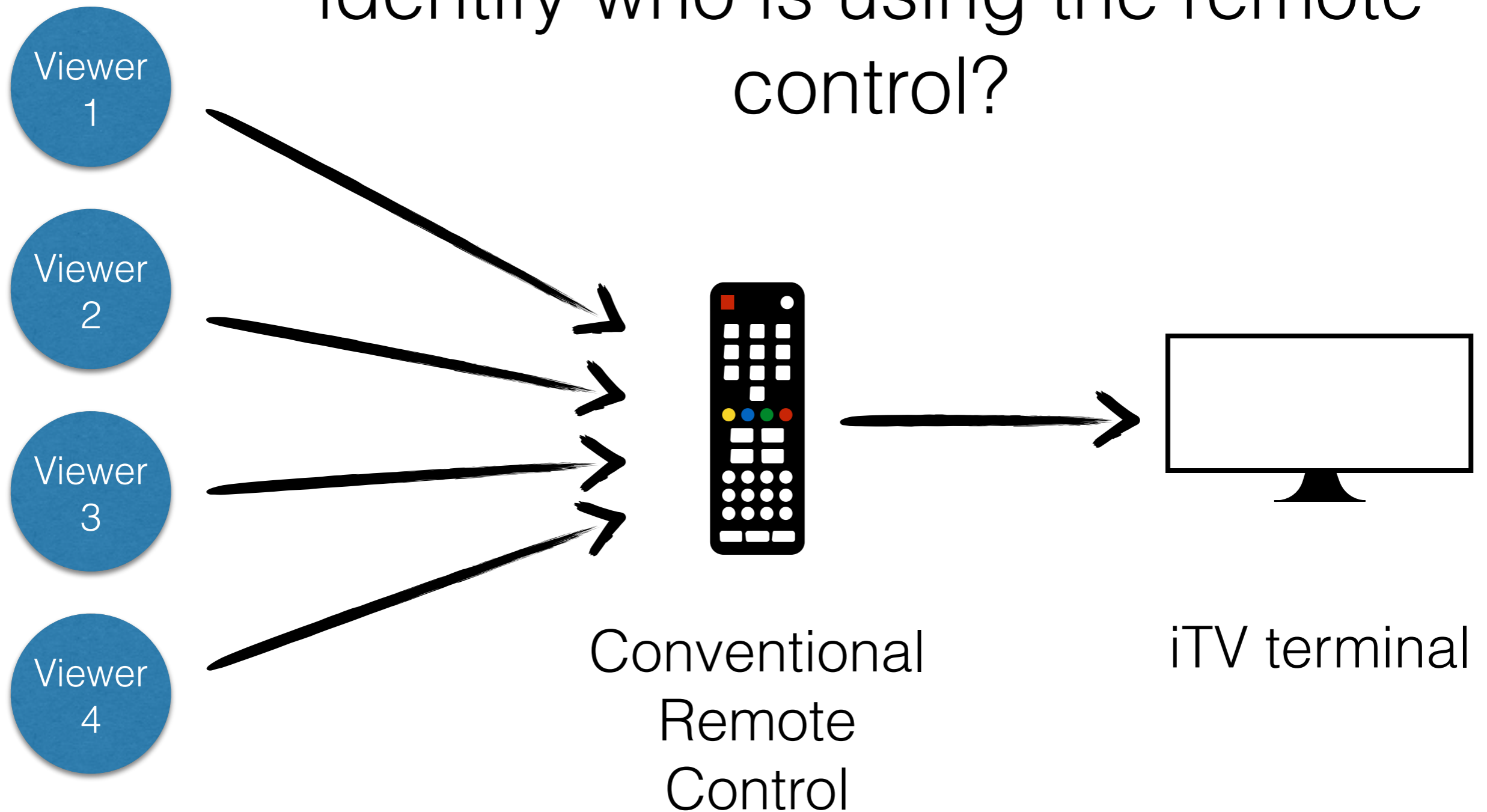
Motivation

- TV watching is essentially a social activity
- Advances in TV technology have enabled the development of high-level iTV applications
- Viewers can actively interact with iTV terminals and services
- Data generated by interactions can provide valuable information to content providers

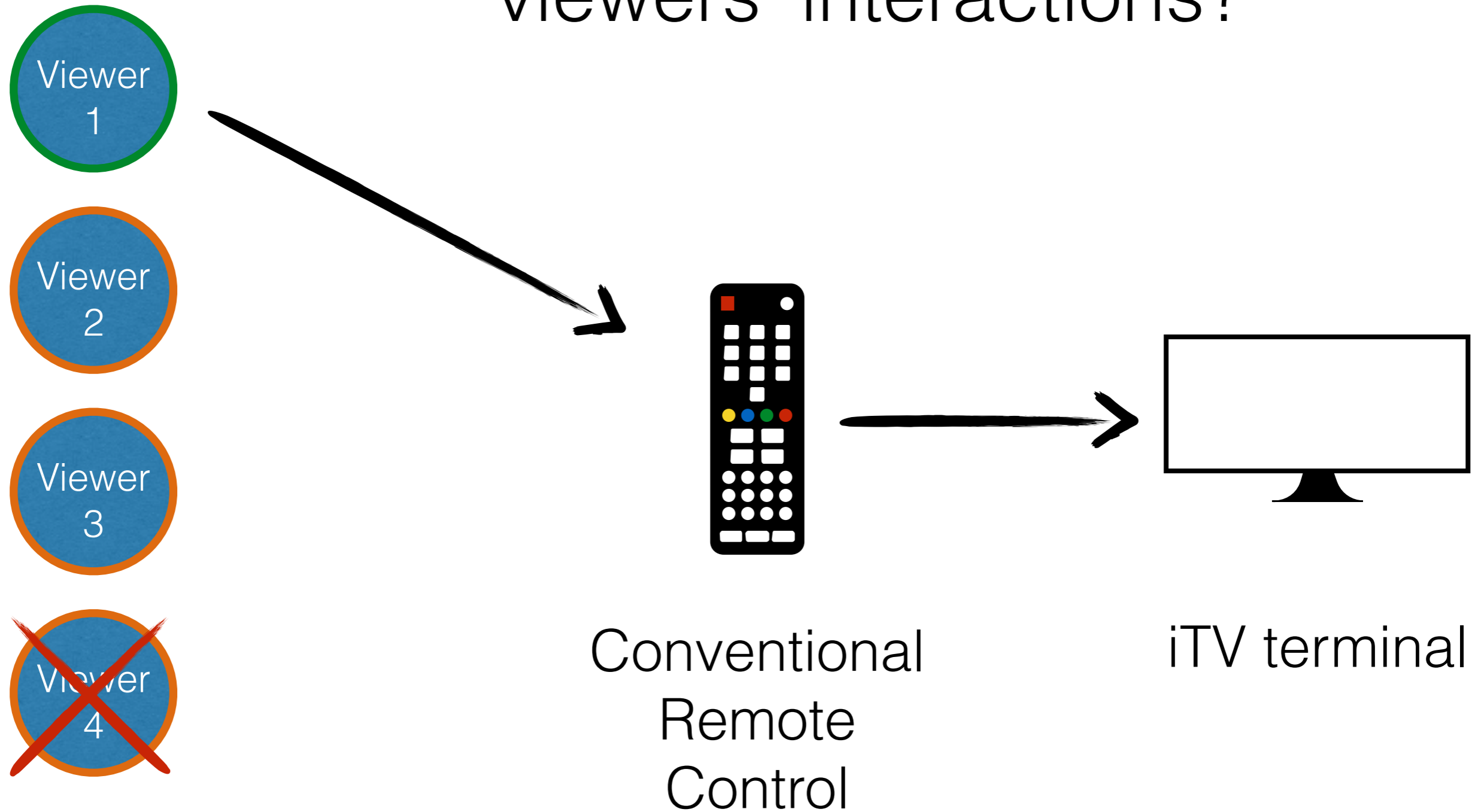
Motivation

- The remote control is typically the standard medium of interaction between viewers and their TVs
- The conventional remote control is shared by many viewers and presents two notable problems

How to precisely and automatically identify who is using the remote control?



How to capture contextualized viewers' interactions?



Motivation

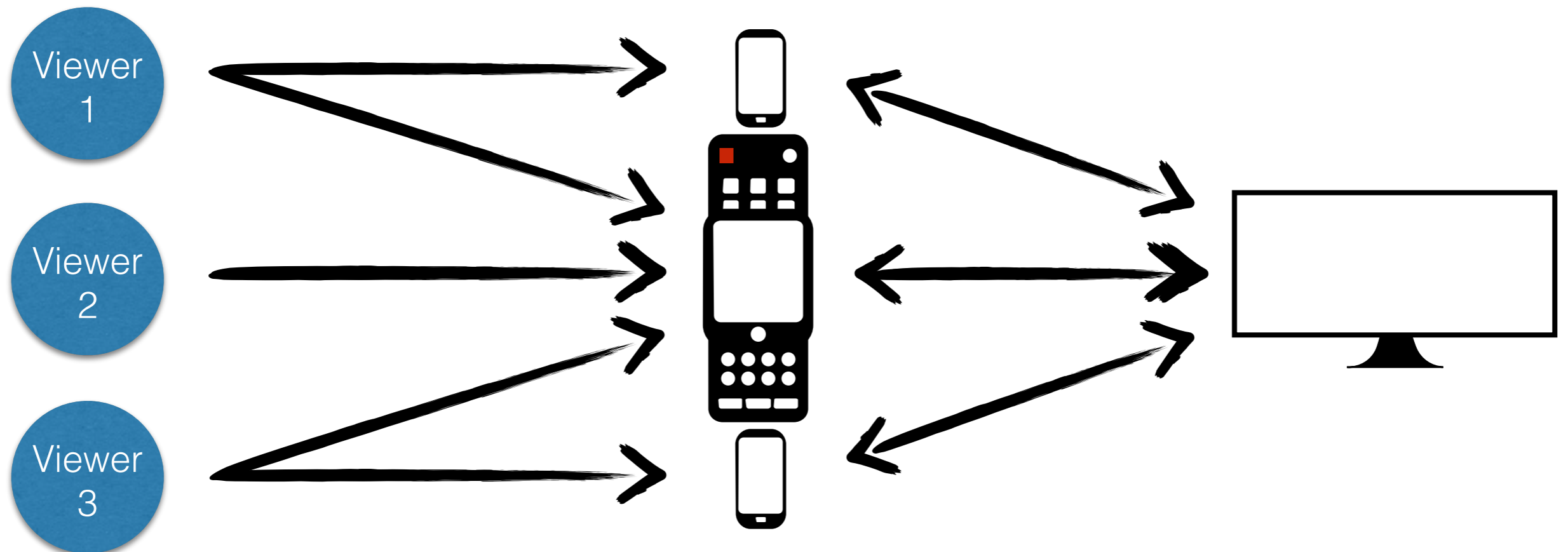
- Since personal devices are almost ubiquitous, they stand out as a powerful mechanism to identify viewers
- Mobile devices are easy and intuitive to use in TV environments as second screen [5]

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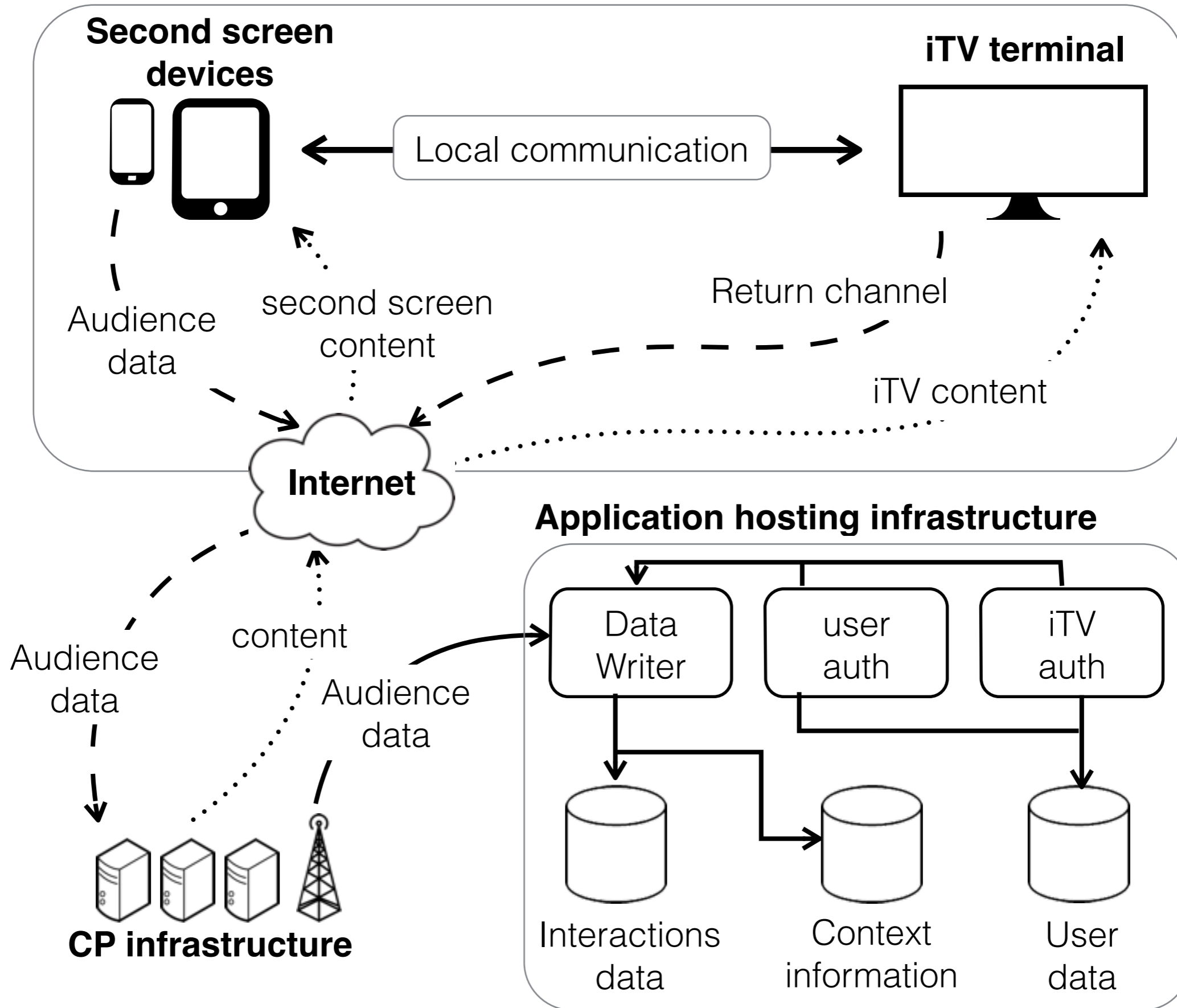
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Second Screen Architecture

- Use of mobile devices as secondary screens to capture viewers' personal and contextualized interactions



TV environment



Second Screen Architecture

- Viewer authentication
- Web services API definition
- The communication between the TV environment and the content provider
- Responses using JSON format

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Why is it Interesting?

- The contributions of the paper focuses on the capture of interaction events from TV viewers
- Content personalization is an important applications for the data generated during the user of second screen devices
- Independence of programming languages and mobile operating systems

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Conclusions

- This architecture takes advantage of the ubiquity and interactive capabilities of personal devices to identify viewers and provide data to content providers
- Content providers can deliver personalized content to viewers
- This architecture is technically feasible to implement in Digital TV systems

Conclusions

- Achieved results:
 - The architecture described in this paper was developed in a commercial cloud computing platform
 - Content rating system to capture navigation events and viewers' evaluations on audio-visual content

Acknowledgements



Questions?

Thank you for your attention.

References

- [5] C. Courtois and E. D'heer, “Second screen applications and tablet users,” in Proceedings of the 10th European conference on Interactive tv and video - EuroITV '12, vol. 11. New York, New York, USA: ACM Press, 2012, pp. 153–156.