Common User Profile for Personalization

Pradipta Biswas, Phd(Cantab)

Associate Professor, Indian Institute of Science

Vice Chair, Study Group 9, International Telecommunication Union

Co-Chair, IRG AVA, International Telecommunication Union

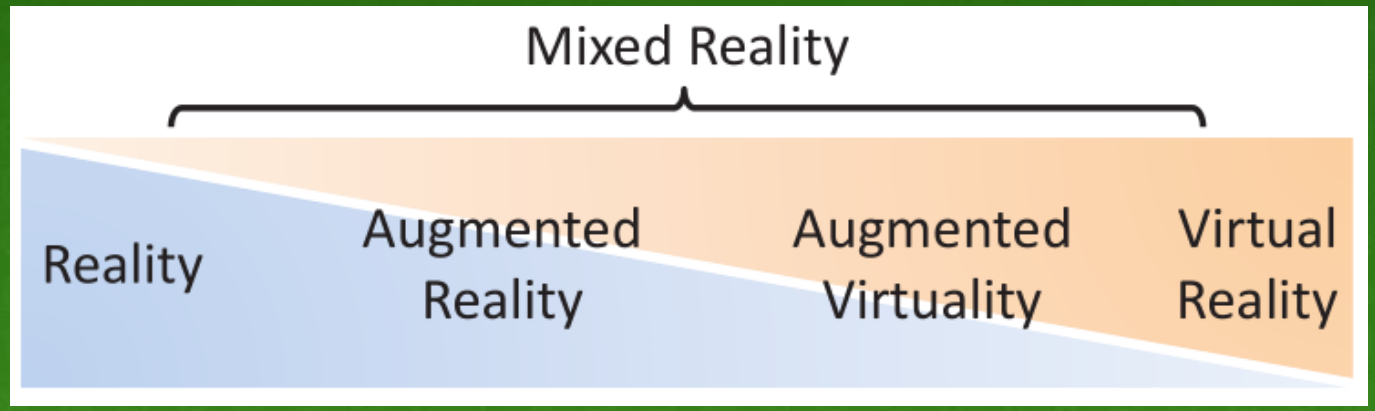
Member, UKRI International Development Peer Review College

https://cambum.net/, pradipta@iisc.ac.in

Continuum of eXtended Reality

Augmented Reality

- Combines real and virtual
- Interactive in real time
- Registered in 3D

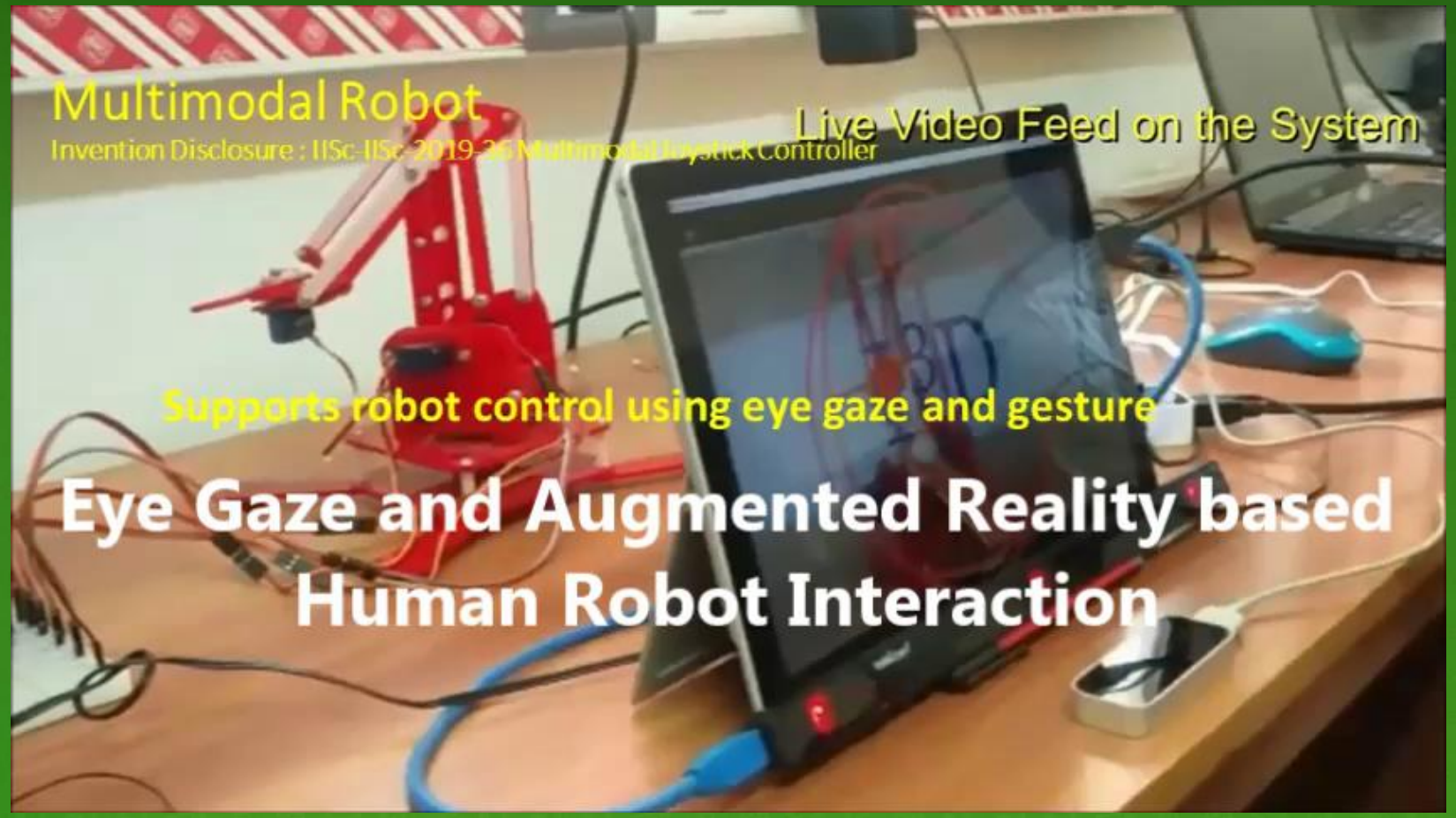


Virtual Reality

- Immersive
- Interactive
- Imaginative

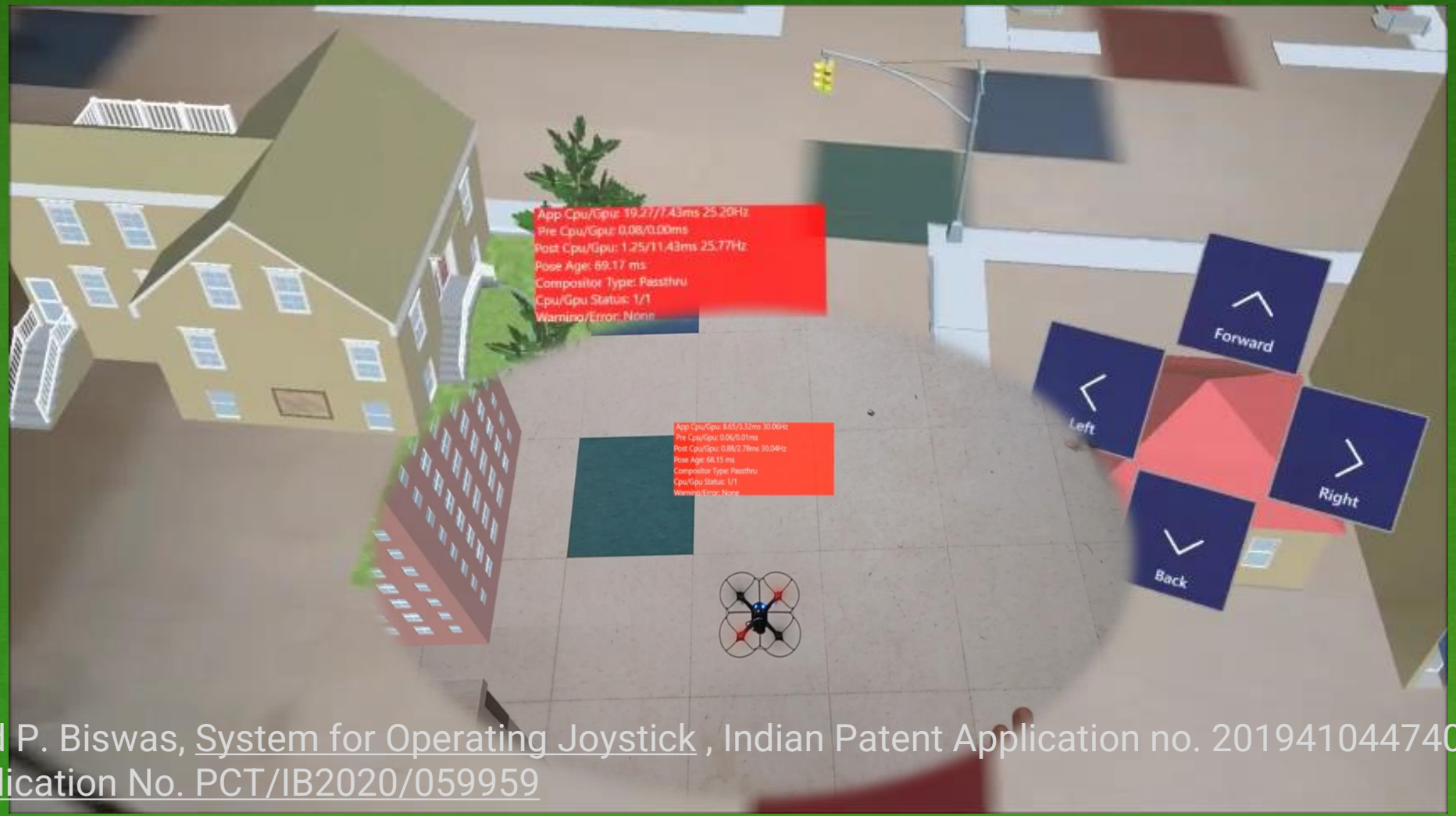
ISO/IEC 18039:2019(E) defines Augmented Reality as "*type of mixed reality system in which virtual world data are embedded and/or registered with the representation of physical world data*" while Mixed Reality is defined as "*system that uses a mixture of representations of physical world data and virtual world data as its presentation medium*".

AR/VR for Accessibility
AV Media to Cyber Physical System



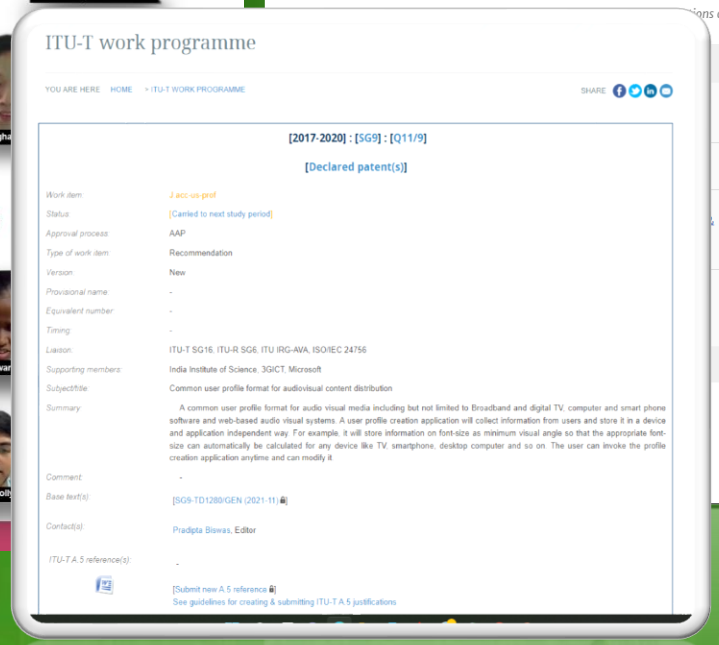
VK Sharma, LRD Murthy, and P Biswas, Comparing two safe distance maintenance algorithms for a gaze controlled HRI involving users with SSMI, **ACM Transactions on Accessible Computing** 2022

AR/VR for Accessibility
AV Media to Cyber Physical System



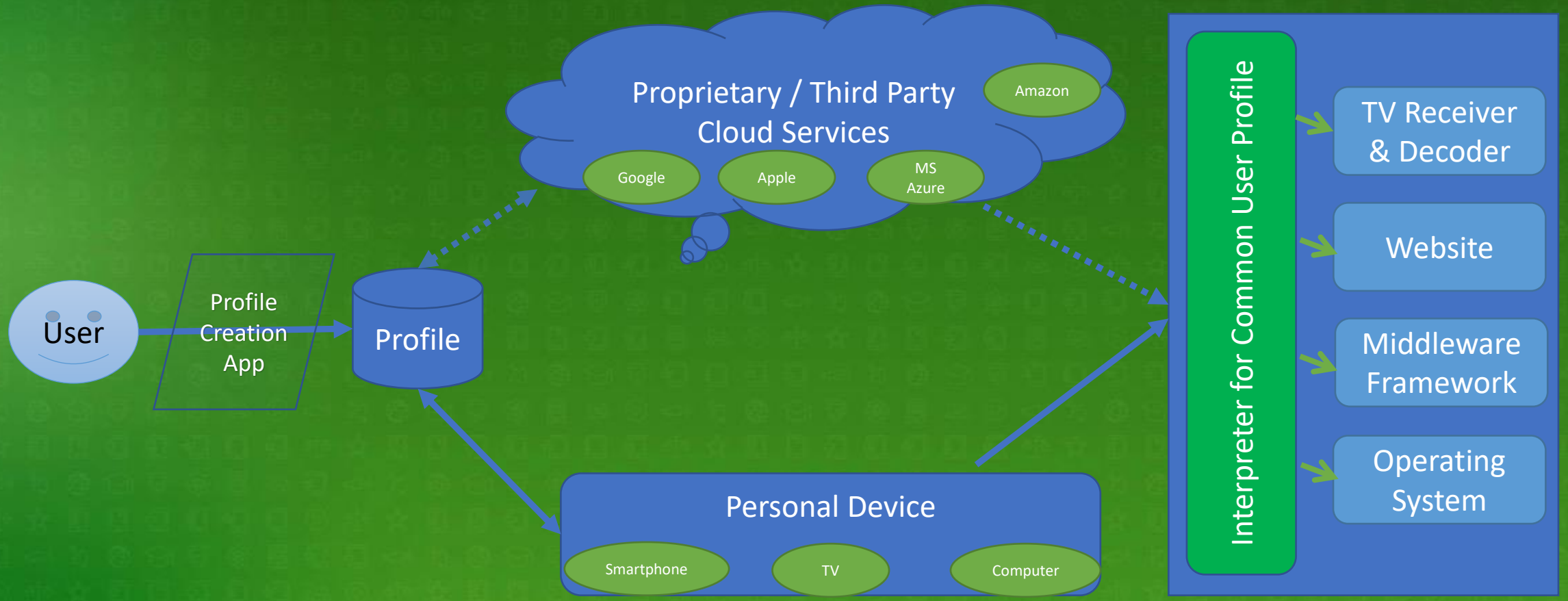
V. K. Sharma and P. Biswas, System for Operating Joystick , Indian Patent Application no. 201941044740, PCT International Application No. PCT/IB2020/059959

Personalized AR /VR



[ITU-T Work Programme]

Common User Profile
Plan of Implementation



Security Aspects

- Format does not specify the physical or network media for storage
- Format does not specify any encryption algorithm or range (end-to-end vs others)
- Profile is stored anonymously
- Profile needs not to be stored on server, can only be stored on client side
- A mapping mechanism can be implemented to share only interface parameters and profile information can be stored on client machine only.
- However, a trusted source can also keep a common repository and use it to personalize applications across multiple platforms

Ways of Integration

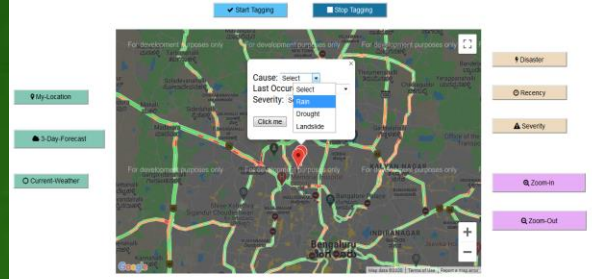
Invoking a mapping application between users' range of abilities and interface parameters

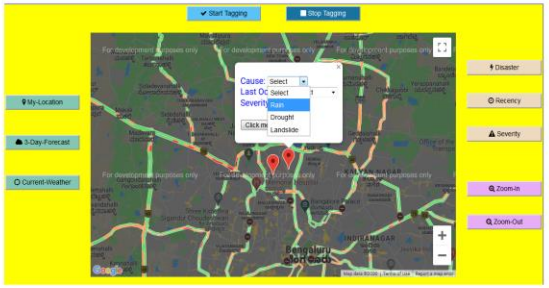
- Executing at server side
- Executing at client machine

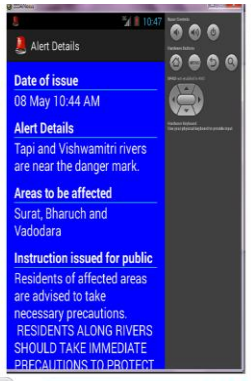
Modifying settings at

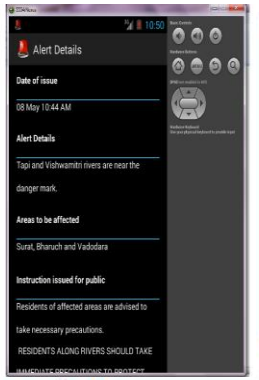
- Application level (e.g.: Android App)
- Browser level (e.g.: Browser Plug-in)
- Middleware level (e.g.: SetTop Box)
- Operating System level (e.g.: new Accessibility feature of Windows / iOS / Android)

- Will **not** be a part of the recommendation









Adapted

Adapted

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Main Challenges

- User privacy, conformance to privacy related legislations
- Acceptable variable nomenclature
- Diverse range of AV media, applications and devices
- Defining minimal set of variables