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ANALYZING THE PROBLEM OF UNIVERSAL DEVICE COMMUNICATION AND USER INTERACTION FOR SMART HOMES AND OFFICES

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Almost all new home and office appliances are beginning to receive smart functionality to optimize their work, provide additional management functions and condition monitoring. This way our lives are being automated and optimized. This trend will grow even more and faster, due to the price of electronics falling, circuits getting smaller and better, chips manufacturing process improving.

It is not difficult to imagine a future where almost all homes and offices are equipped with smart device platforms. The question arises: will it be easy for a user to interact with smart devices which are made by different manufacturers? As of today, it is required to install different apps to manage different smart products. The competition between smart equipment manufacturers will be very serious. If the process of smart home interaction will not be standardized - the user will be inclined to buying equipment from a single manufacturer.

As of today, buying "ecosystems" of devices is considered best, as they are well tested to work together. Moreover, manufacturers provide native apps to control their devices, giving the flexibility to create an ideal smart environment. But in the near future, when devices for smart equipment will be available to almost everyone, made by different manufacturers, with different functions and capabilities, there must be a single interface to control the interaction of these devices. Moreover, the ability to easily configure this interaction should be available for all users regardless of technical knowledge, implemented with a user-friendly and intuitive interface and high extensibility in mind.

To sum up, the processes of device communication and user interaction should be standardized in order to solve the inter-ecosystem compatibility issue. As a result, the user can buy a smart lamp and smart doorbell from different manufacturers, a smart air conditioner from a another one and also a smart thermometer do be hanged outdoors. The user can easily program the interaction between these devices without writing a single line of code: when the doorbell is triggered, the lamp and air conditioner will turn on, fetching the temperature from the device outdoors, setting the perfect contrast temperature at the entrance.

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