Stacked Commands - The Future of Virtual Personal Assistants?

The virtual assistants trend is currently in full swing and it's easy to lose focus on the users. None of the current assistants can handle multiple executions of commands with a singular command. Stacked commands make it possible.

In my thesis I have researched the field of Virtual Personal Assistants, such as Apple Siri and Google Assistant. The thesis was designed to uncover the current habits of users utilising digital assistants and discover if any improvements could be made.

None of these assistants can currently handle multiple execution of commands at once, therefore I sought out a way to easily implement this in a feature called stacked commands. This feature handles several individual commands by placing them in a stacked sequence and executing each command one after another when a certain phrase is spoken.

To overcome this gap, I created a prototype to simulate this feature of stacked commands by using simple phrase commands in conjunction with Google Assistant. I designed the prototype to function in a home environment system, as this is easily relatable to the average user.

The prototype had a set amount of stacked commands to use, such as "Home status", "Secure property" and "Good night". These commands allowed the user a flexible range of commands to modify individual settings and change the status of certain objects within the home environment. This flexibility in command options gives the stacked commands feature more variety and personalisation to each user's needs.

In a home system it can be important to quickly and effectively receive an overview of the entire house. By using stacked commands, it is possible to receive this overview by simply voicing a "Home status" command to your device to then receive an overall status report of the house.

There are various fields where stacked commands in digital assistants could become extremely useful. These include eyes-busy or hands-busy situations, such as a car, where the assistant then becomes the de facto tool. In these situations, it is useful to be able to voice simple and straight forward instructions to a device that can then fetch different objects or information and perform any changes the user requires, creating minimal disruption to the user's surroundings or concentration.

To unlock the full potential of virtual assistants they will need to evolve so that they can perform complex tasks set out by the user. The current trends show that smart devices and their applications will have more frequent use in the future and is an important step for the assistants and smart appliances to connect to each other. To be able to control multiple smart objects, it will be essential to receive a complete overview of all the connected applications, and with stack commands this could prove to be the key in creating a fully connected society.

Perhaps this could be the next iteration for the stack command feature in virtual personal assistants?