

Component-Based Software Engineering (CBSE)

What is CBSE?

- In CBSE we develop software using already available components.
- In this kind of development there is no concept of building any software from the scratch.
- Components communicate with each other by their well define interfaces.

Properties of components

- Independent
- Standardized
- Deployable
- Documented

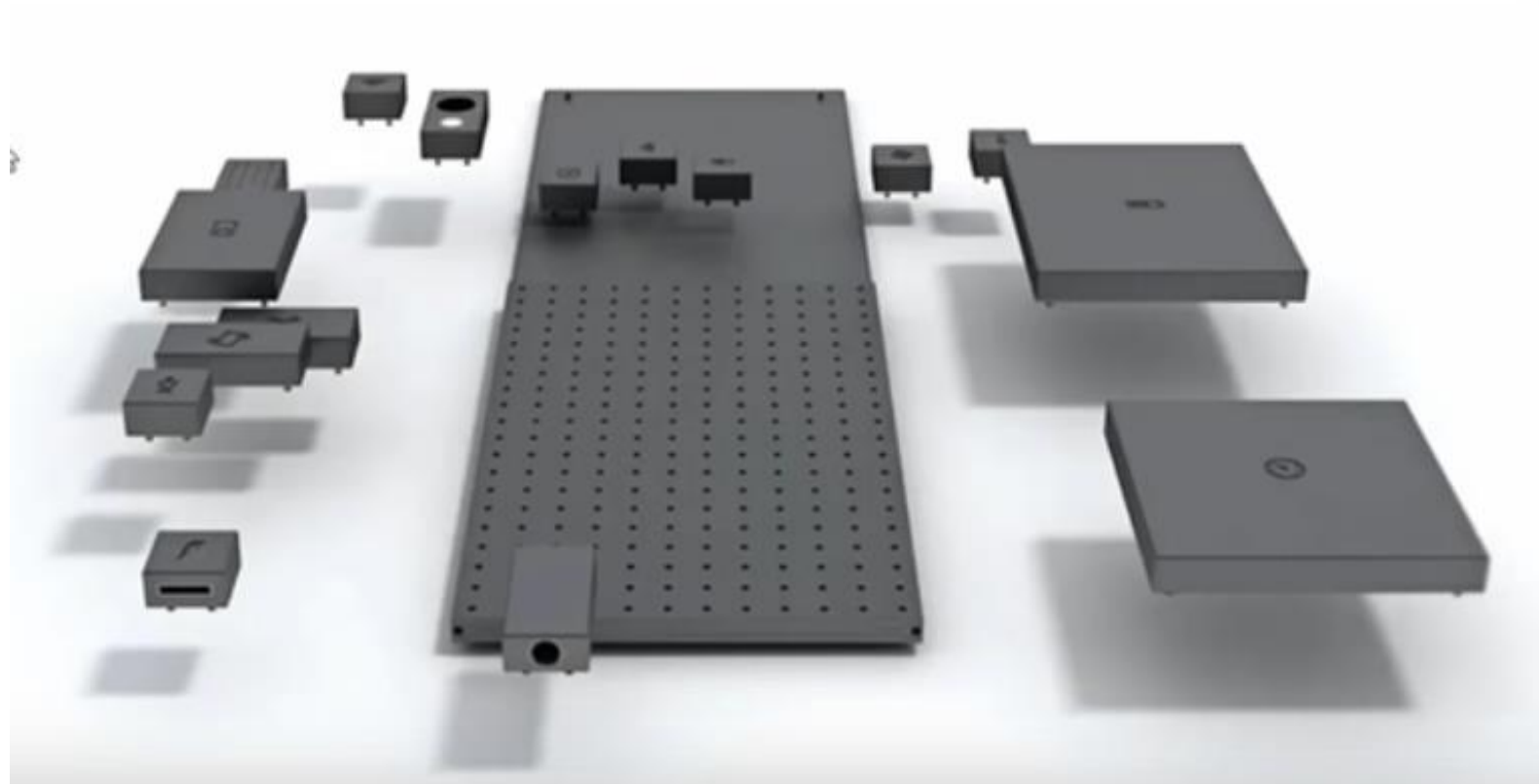
benefits of CBSE

- Reusability
- Extensibility
- Maintenance

Not limited to software

- Companies are now implementing this approach to software. They are implementing it to the hardware as well.
- Specially google, ZTE, Mi are thinking to implement this approach on mobile phones.
- Even this thing is becoming common in the Auto mobile industry, they are focusing in plug and play approach.

Example to make you clear



CBSE Framework Activities

- ▶ **Component Qualification:**

This activity ensures that the system architecture define the requirements of the components for becoming a reusable component.

- ▶ **Component Adaptation:**

This activity ensures that the architecture defines the design conditions for all component and identifying their modes of connection.

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- **Component Composition:**

This activity ensures that the Architectural style of the system integrates the software components and form a working system.

- **Component Update:**

This activity ensures the updation of reusable components. Sometimes, updates are complicated due to inclusion of third party