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# Towards a Natural Interaction Concept for SUI in AAL

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## Outline

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- Observations
- The Unified Digital Interaction Interface
- Canonical Tasks
- Interaction Concept
- Dialog demo
- Future Work

## Observations

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### ■ User Interaction

- Confrontation with multiple heterogeneous devices for interaction with different interaction concepts
- Aging and impairments for AAL users

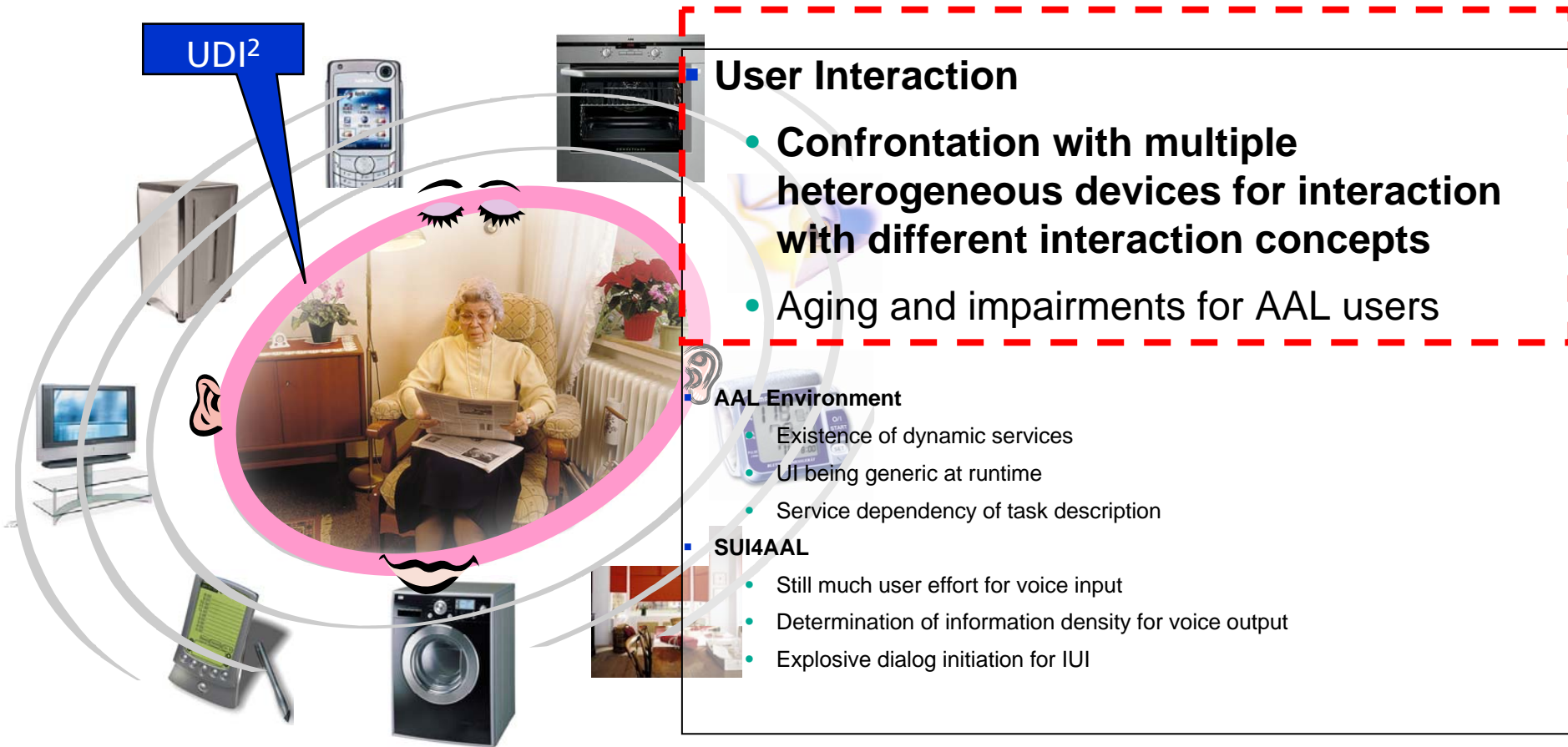
### ■ AAL Environment

- Existence of dynamic services
- UI being generic at runtime
- Service dependency of task description

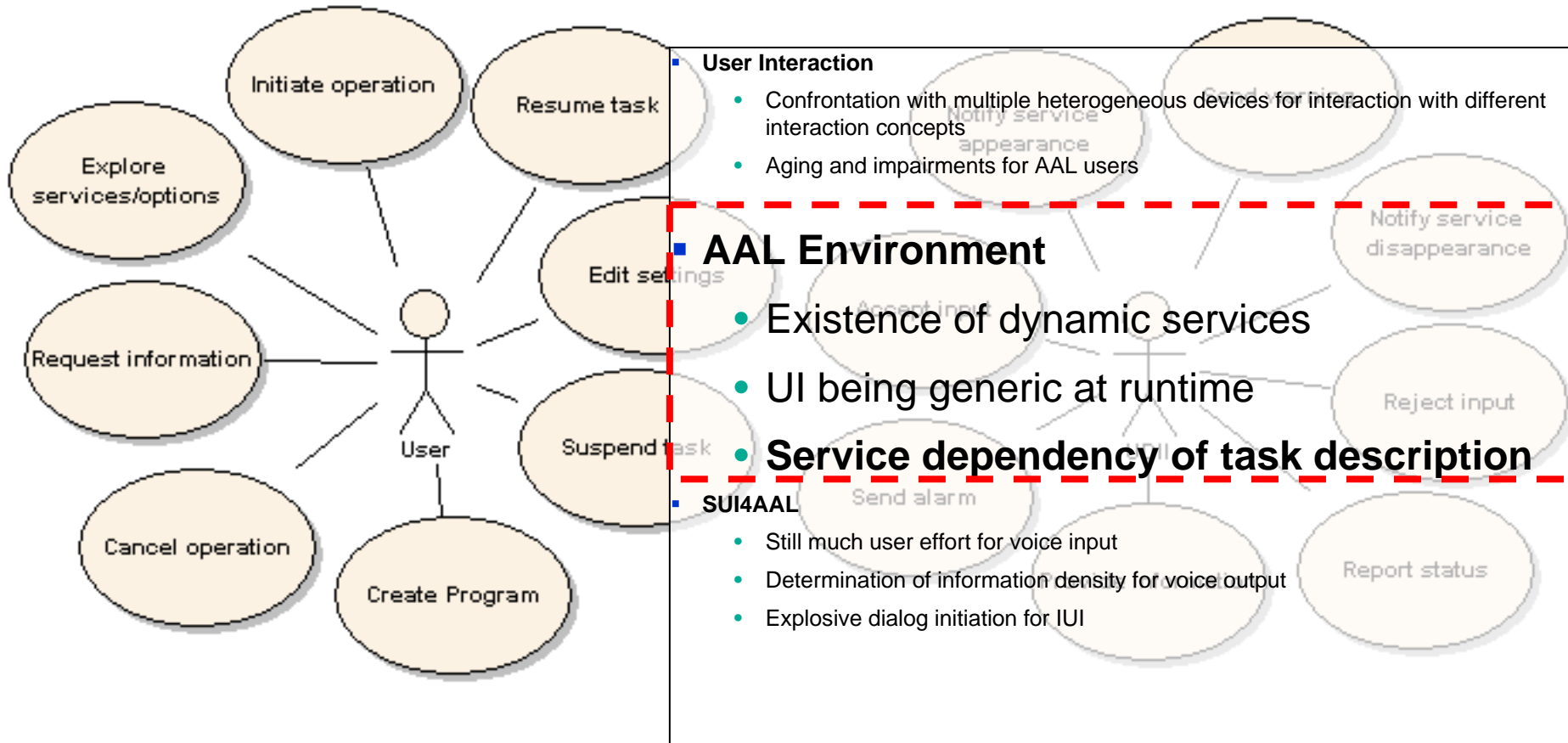
### ■ SUI4AAL

- Still much user effort for voice input
- Determination of information density for voice output
- Explosive dialog initiation for IUI

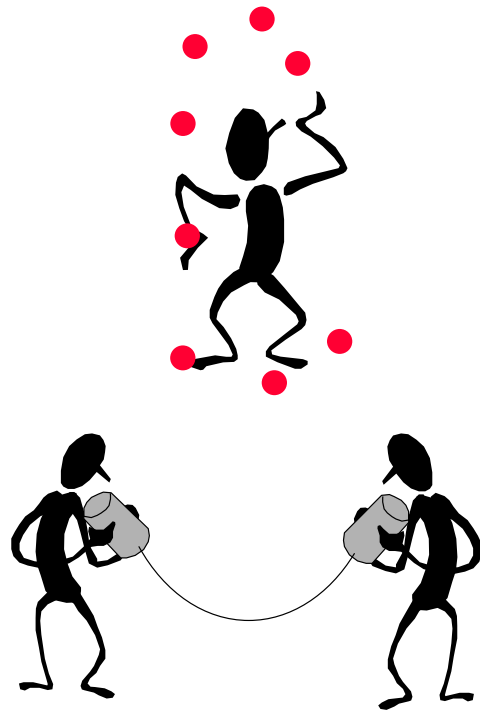
## The Unified Digital Interaction Interface – A Mediator



## Canonical User Tasks – Service independency

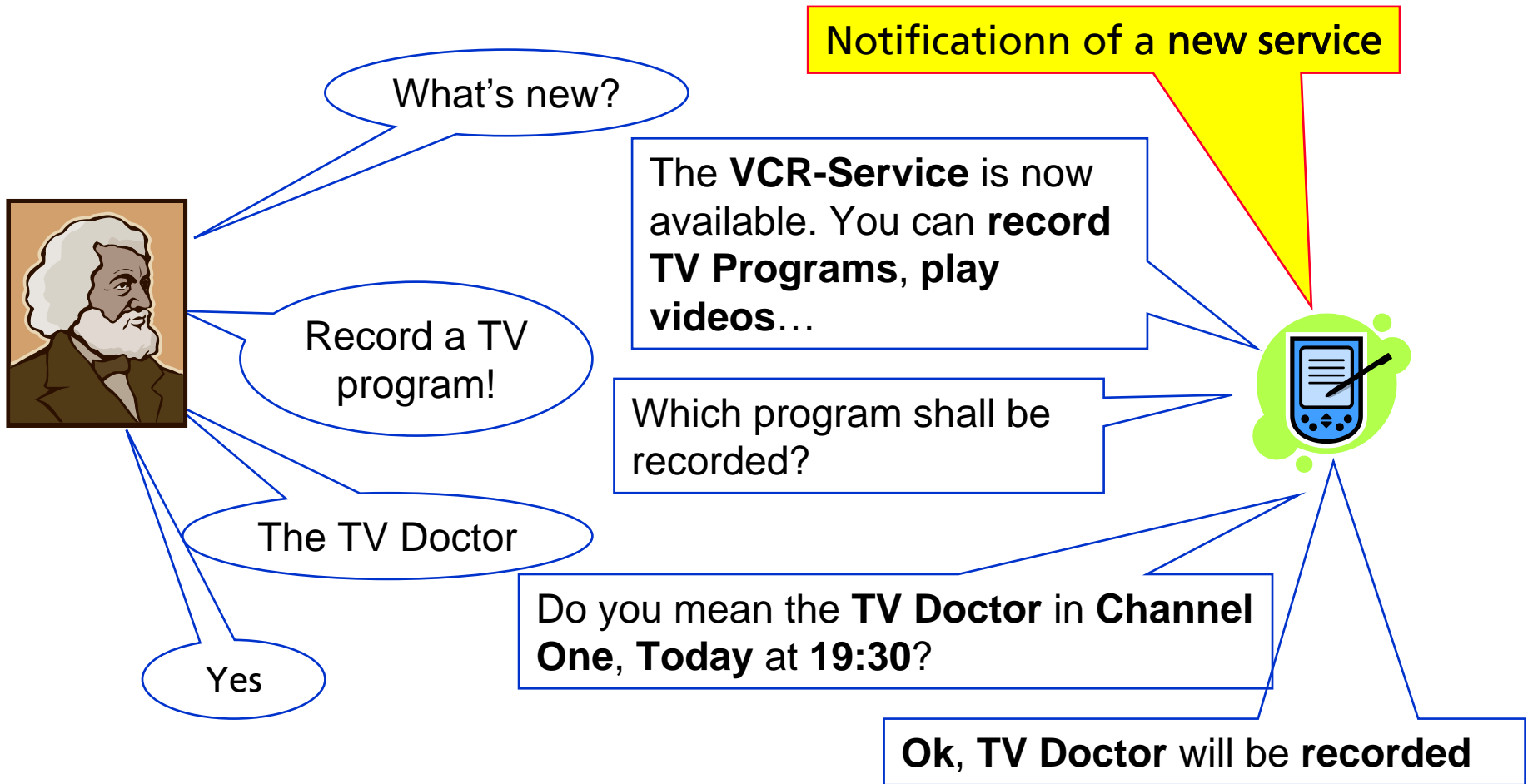


## A natural interaction concept



- Learning from behaviour of experienced sales assistant
  - Attract users attention first
  - Provide adequately support
  - Limit the information density for output
- User Interaction
  - Confrontation with multiple heterogeneous devices for interaction with different interaction concepts
  - Aging and impairments for AAL users
- AAL Environment
  - Existence of dynamic services
  - UI being generic at runtime
  - Service dependency of task description
- SUI4AAL
  - Still much user effort for voice input
  - Determination of information density for voice output
  - Explosive dialog initiation for IUI
- Design voice interaction
  - Reduce user efforts but optimize system output

## SUI – A Dialog Demo



## Work still to be done

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- Validate canonical tasks
- Conduct an Experiment for answer open questions regarding the natural interaction concept, e.g.,
  - Which sound signals are proper?
  - How can the “adequacy” of support be determined?
  - How can the information density for voice messages be determined?
- Define a Framework for SUI applications

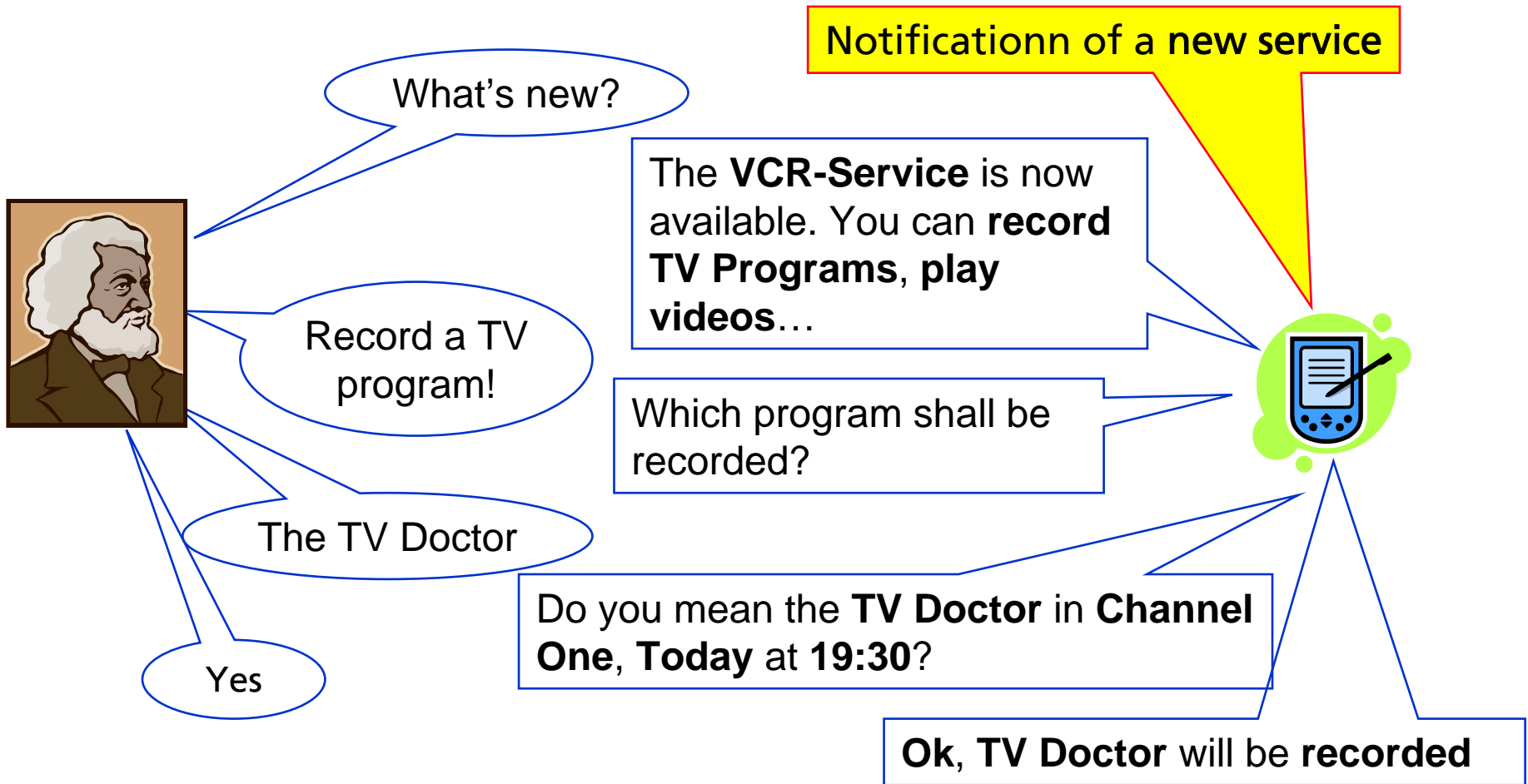
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Thanks for listening



## Using the VCR Service

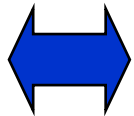


## SUI – A Dialog Demo


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User




UDII

 provides a „Notification signal for a **new service**“

 „*What’s new?*“


 „*The **VCR-Service** is now available. You can **record TV Programs, play videos ...***“

 „*Record a TV program*“

 „*Which program shall be recorded?*“

 „*The TV Doctor*“

 „*Do you mean the **TV Doctor in Channel One, Today at 19:30?***“

 „*Yes*“

 „*Ok, **TV Doctor** will be recorded*“