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| Input contributionUse case |
| Use Case Title:\* | Use cases for machine self learning |
| Group Name:\* | TP#20 |
| Source:\* | CMCC |
| Contact: | Yawen Niu (niuyawen@chinamobile.com)Zhang Yong (zhangyongyj@chinamobile.com) |
| Date:\* | 2015-11-2 |
| Abstract:\* | Propose to add the use case that specify the M2M service platform should support the machine to perform learning process.  |
| Agenda Item:\* |  |
| Work item(s): | WI 0015 - oneM2M Use Case Continuation |
| Document(s) Impacted\* | Technical Specification TR 0001 - oneM2M Use Case Technical Report |
| Intended purpose ofdocument:\* | [x]  Decision[x]  Discussion[ ]  Information[ ]  Other <specify> |
| Decision requested or recommendation:\* | Approval of the Use Case |

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* 1. **Title**

Use cases for machine self-learning

* 1. **Description**

An air conditioner is deployed in an office to control the temperature and humidity. When the user arrive at the office, he always starts the air conditioner and adjusts the control parameters to keep the office comfortable. When the user leave the office, he always shut down the air conditioner to save energy. The air conditioner collects the user operation records and depend on these records, it learns that the user usually arrives at office around 8Am and leaves the office after 5Pm, when the outside temperature is above 28℃, the user usually set the office target temperature to be 26℃. When the outside temperature is below 10℃, the user usually set the office target temperature to be 18℃. After the above knowledge has been extracted from the user’s operation records. The air conditioner could automatically control itself.

The M2M service platform should save the user operation records and analyse the user’s operation habits. After some knowledge has been learned, the machine can operate automatically.

* 1. **Source**

CMCC

* 1. **Actors**
* The air conditioner is deployed in an office and collect operation records.
* M2M service platform save operation records and analyze it in order to learn the user habits.
* M2M service platform automatically operate air conditioner.
	1. **Pre-conditions**
* NONE
	1. **Triggers**
* The air conditioner is start by a user.
	1. **Normal Flow**
* The air conditioner is start by a user.
* The air conditioner collects user operation records and save it to the M2M service platform
* M2M service platform learn the operation records to learn the user habits.
* M2M service platform automatically operate the air conditioner.
	1. **Post-conditions** (if any)

NONE.

* 1. **High Level Illustration (**as applicable)



* 1. **Potential requirements (as applicable)**
* The M2M service platform shall support to save the machine operation records and analyze these data in order to learn the user habit and for further auto operation.