



My Home is my CASTLE

Applied technologies in health care services are part of the Internet based Home Systems



Read more about the EPR-forum program:

«Elderly Healthcare Challenges» <http://sites.google.com/site/eldreomsorg/>

Services in your Hand:

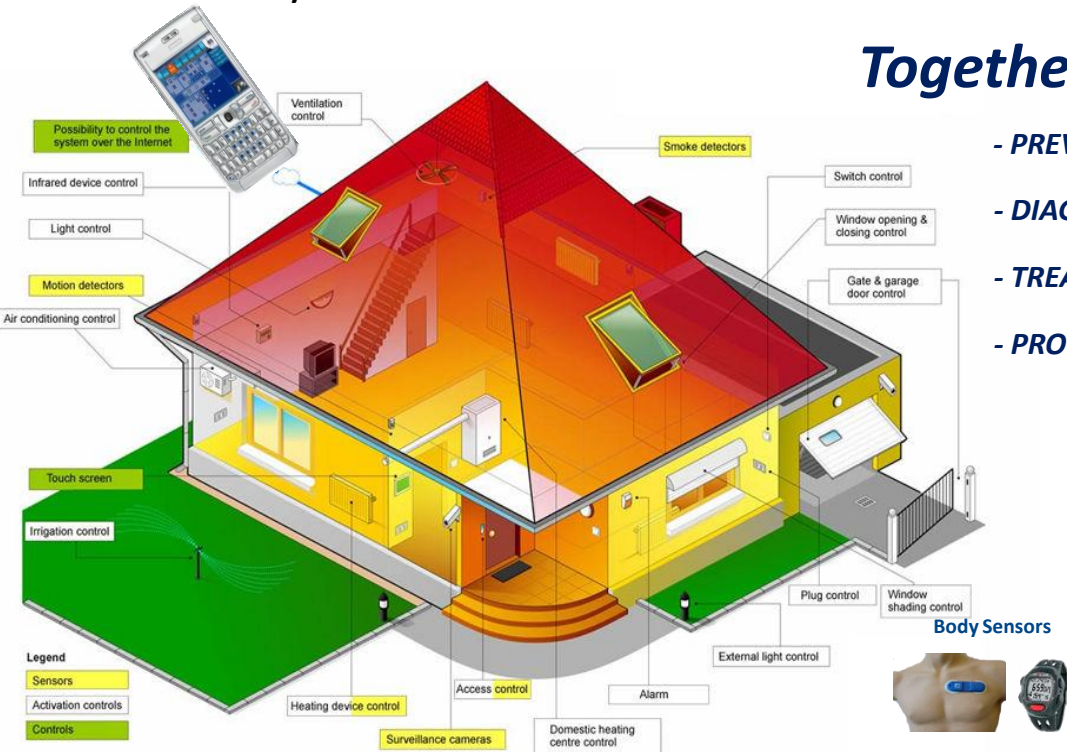
Open standards : [OASIS BCM/CAM – EPR SC](#) and [EPR-forum](#)

Together with Quality :

- PREVENTION (Diet, Exercise)
- DIAGNOSIS (Nano-technology)
- TREATMENT (Best Practice)
- PROCEDURES (Best Practice)



Smart House Demo



EPR-eDevice Open standard: ("Mirroring – standard")

Functional modeling of Network devices (Noder)

OVER 25 YEARS OF FUNCTIONAL STANDARDIZATION: (1984- 2010)

An **Interoperability standard** for electronic network equipment devices derived from the ANSI/CEA-721 work being done over the last 25 years by enterprises, organizations and individuals as:

NEW APPLICATIONS:

These standardized functional models of Nodes will be interacting with **SERVICE**-based Super portals by help of **Web services** technology.

These models are categorized in a catalog (**EPR-eDdevice UDDI**) representing standardized "**mirrored**" functional of certified Nodes.

- ABB**
- Ademco
- AMP**
- Analog devices** (Domsys Corporation)
- Caddx Controls
- Chamberlain Group
- Cutler-Hammer
- Diablo** Research Corporation
- Dr. Ken Wacks (MIT)
- Ericsson**
- Full House Control
- General Electric** (Homenet)
- Honeywell**
- HP** (Compaq Computer Corporation)
- Hypertek
- IBM**
- Intel**
- InteliHome
- Intellon Corporation**
- Interactive Media Systems
- ISO/IEC JTC1 SC25 WG1 Home Electronic System
- IT & Integration** (EPR-forum)
- Leviton**
- Lucent Technologies**
- Microsoft**
- Molex**
- Panasonic Technologies**
- Philips**
- Siemens**
- Smart Corporation** (Microsoft + GE)
- Tecom
- The Training Department
- Thomson Consumer Electronics**
- XLSynergy

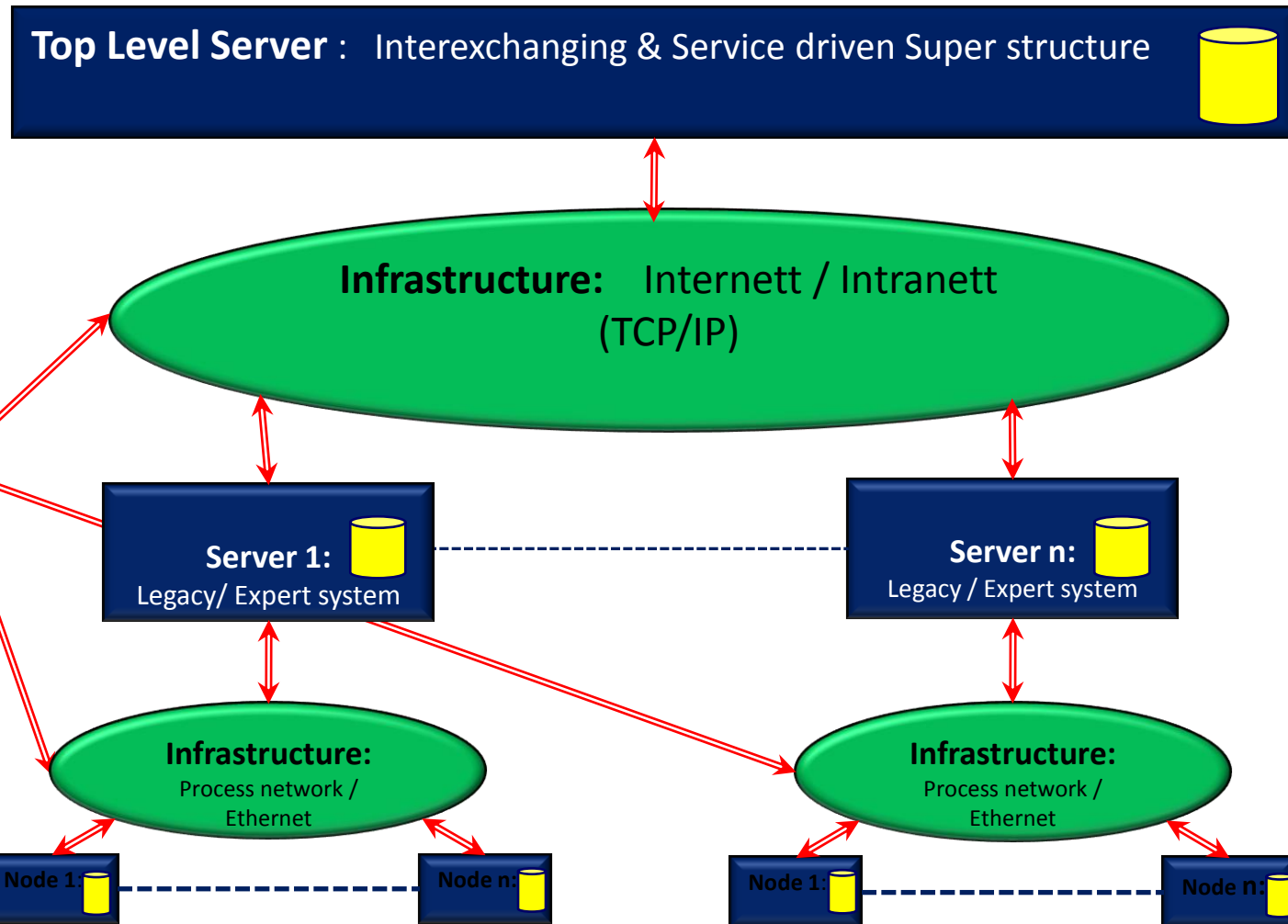
Interoperability in the Infrastruktüre layer

Common "Traffic rules" (red arrows) a must to achieve Interaction, Integration and reusability

Multi functional User Interfaces:
(Mobil, PDA/Pad, LapTop, PC, Touch Screens etc)



Flexible and Open User Interface:
OS in-dependency
(Cross Platform based)



The superstructure 4 Role groups

Anna DEMO

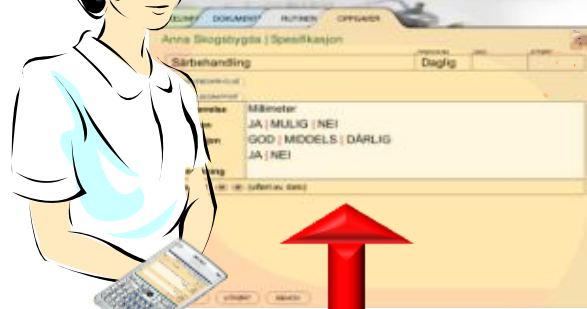
1: Supervisor:

eFolder constructor:



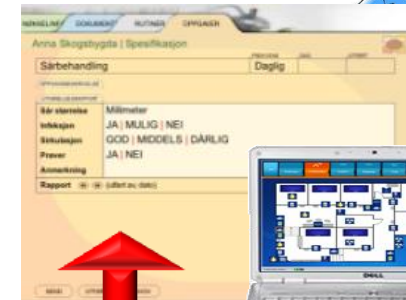
3: Service exwcuters:

Adm. and Service employees along with family and friends



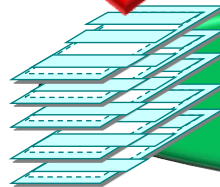
4: Service receivers:

Citizens



Specifications:

Based on common regime rules (models)



Super structure:
An Infrastructure organized through user controlled Service Folders (EPR-eFolder)

2: Portal & System developers:

Portal and Legacy programming



Legacy / Expert Systems

with different business logic



Service Areas – Application Groups – Networks Devices (Nodes)

Service Executer:



Work instructions and Reporting:
Mobile as Control unit and working tool

Service Receiver:



Health Monitoring:
Body and Environment sensors

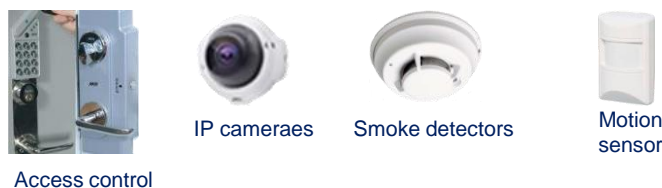
Social network:



Entertainment & Social Activities:



Security & Environmental control :

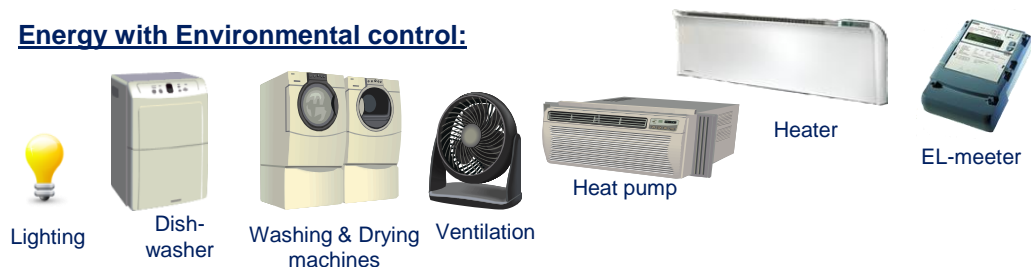


- Appl. Groups:**
(Functional Profiles)
- 0x General
 - 1x Audio/Video
 - 2x Lighting
 - 3x Communication
 - 4x HVAC
 - 5x Utility
 - 6x Security
 - 7x Appliance
 - 8x Convenience
 - 9x Food
 - 10x Health
- x = sub groups

Meal preparations & Environmental control:



Energy with Environmental control:



NANO based Health condition sensors:



EPR eDevice Access control

INTERNET / INTRANET

WEB Browsers: Thin Clients (OS independent GUI)



Web Access portal:

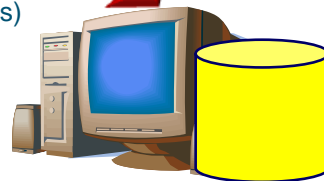
(Web services technology)

- UDDI (Device catalog / product overview)
- WSDL (Peer = mirrored XML device model/)
- SOAP (message protocol)

SOA Front Office

Portal + UDDI device catalog

(WSDL models of electronic network devices)



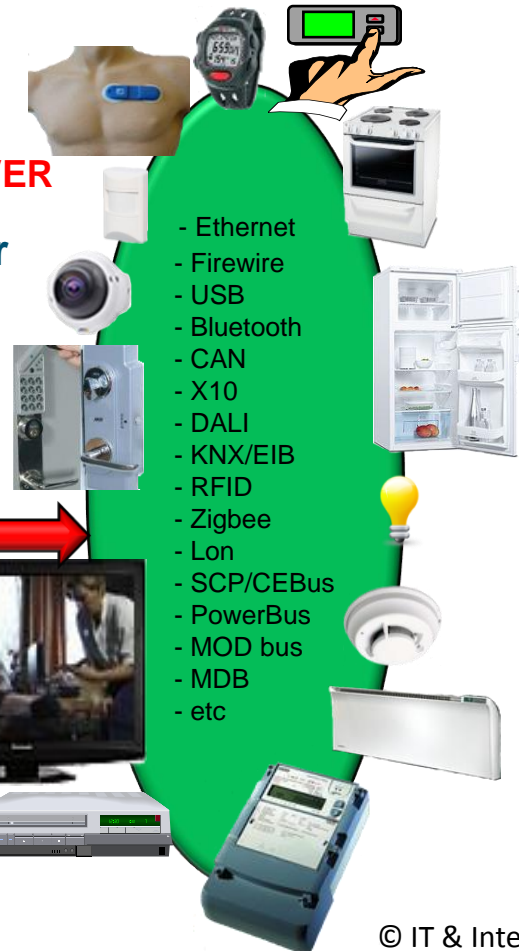
PROCESS-NETWORK

Bus controlled eDevices:

PROCESS - SERVER

Home server

Interface



- Ethernet
- Firewire
- USB
- Bluetooth
- CAN
- X10
- DALI
- KNX/EIB
- RFID
- Zigbee
- Lon
- SCP/CEBus
- PowerBus
- MOD bus
- MDB
- etc

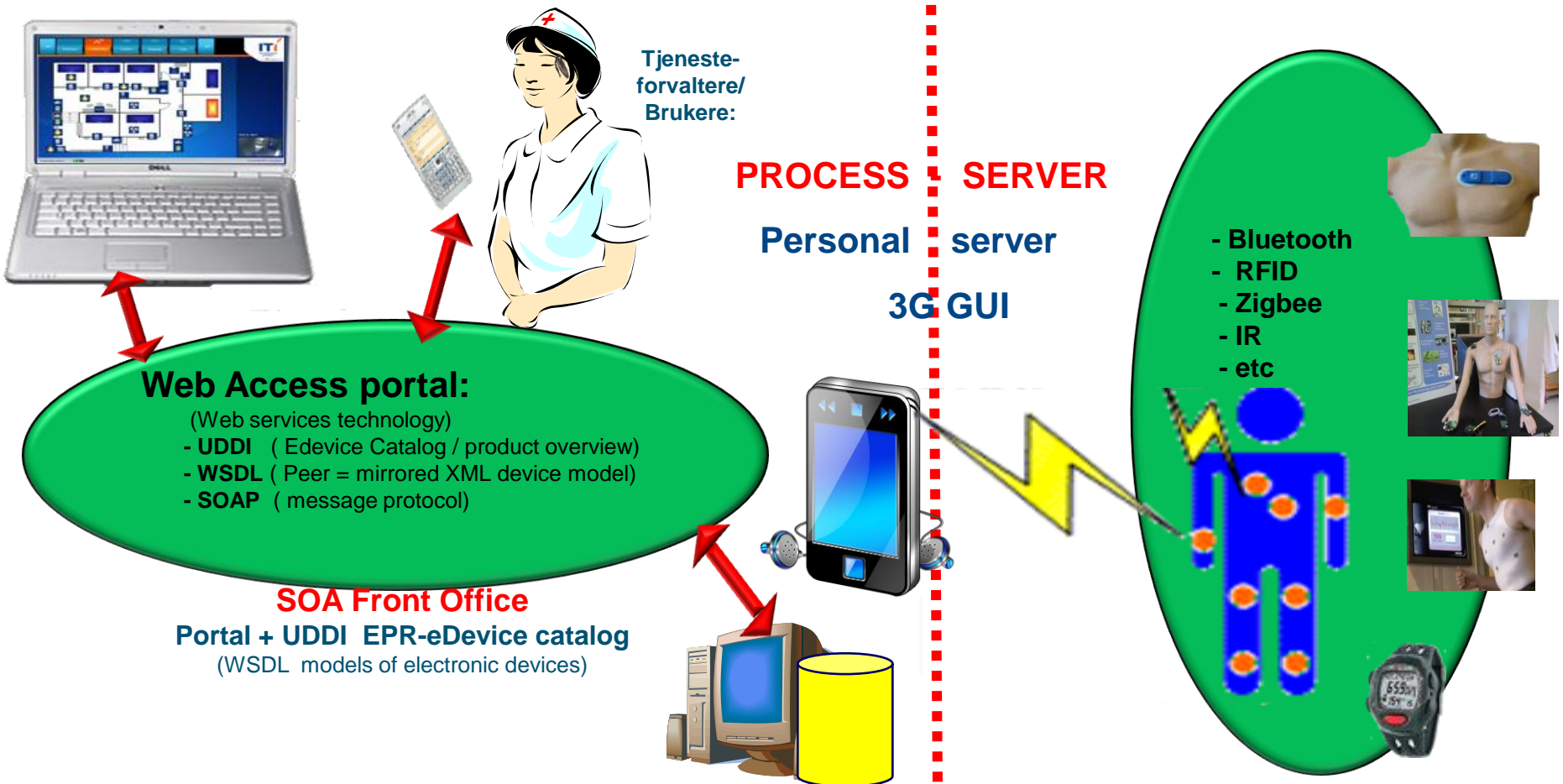
Wireless sensors Network

INTERNET/ INTRANET

WEB Browsers: Thin Clients (OS independent GUI)

PROCESSNETWORK

Bus controlled eDevices:



Scenario variables for the eDevice Engine

(Used in EPR-eDevice Templates)

Universal Variables = User SCENARIO Variables

MEASUREMENTS:

(Environment Inputs)

Temperature sensors (°C)
 Humidity sensors (%RH)
 Blood Pressure sensors(Bar)
 Dimmer sensor (%)
 Speed sensor (m/s)
 Voltage sensor (Volt)
 Current sensor (Amp)
 Load sensor (kWh)
 Switch sensor (On/Off)
 Pulses (Counter)

ACTUATORS:

(Environment Outputs)

Voltage output (Volt)
 Level output (%)
 Dimmer output (%)
 Relay output (On/Off)
 .
 .
 .
 .

SYSTEM/GUI Values:

(Internal SW values)

Thermostat set point (°C)
 Alarm limits
 Clock
 Timer Event
 Intervals
 Step value
 .
 .

.
 .

The eDevice Node Productmodel building elements

eDevice Interoperability layer: (Application modeling+CAL)

Appl. Groups: (CX)

(Functional Profiles)

- 0x** General
- 1x** Audio/Video
- 2x** Lighting
- 3x** Communication
- 4x** HVAC
- 5x** Utility
- 6x** Security
- 7x** Appliance
- 8x** Convenience
- 9x** Food/Meal
- Ax** Medical/Health

Appl. Fuctions: (OB)

- 01** Node Control
- 02** CX Control
- 03/04** Data Chan. Rx/Tx
- 05/06** Binary Output/Input
- 07/08** Analog Output/Input
- 09** MultiPosition Output
- 0A** Multi-State Input
- 0B** Matrix Output
- 0C** Multiplane Output
- 0D** Ganged Analog Ctrl
- 0F** Meter
- 10** Display
- 11** Medium Transport
- 13** Dialer
- 14** Keypad
- 15** List Memory
- 16** Data Memory
- 17** Motor
- 19** Synthesizer-Tuner
- 1A** Tone Generator
- 1C** Counter/Timer
- 1D** Clock

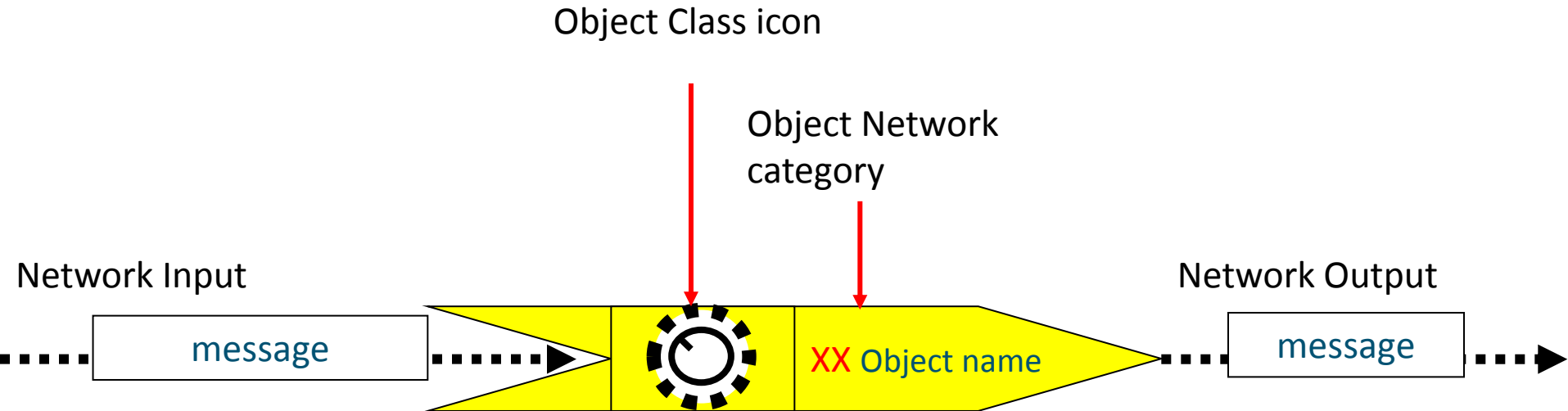
Appl. Variables: (IV)

- b** Boolean data (On/Off)
- c** Letters (ASCII text)
- n** Numbers (Integer)
- d** Binary data (Hex bytes)

SOAP(CAL methods):

SETOFF
SETON
GETVALUE
GETARRAY
SETVALUE
SETARRAY
ADD
INCREMENT
SUBTRACT
DECREMENT
COMPARE
COMPARE_I
COPYVALUE
SWAP
EXIT
ALIAS
INHERIT
DISINHERIT
IF
DO
WHILE
REPEAT
BUILD

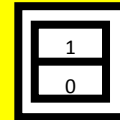
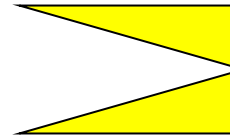
Basic object icon format



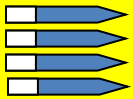
Object Symbols



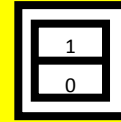
01 Node Control



05 BinaryControl

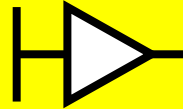


02 Context Control



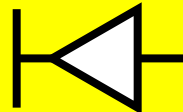
06 BinarySensor

03 Data Ch.Rx



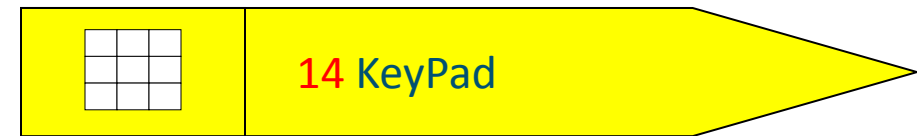
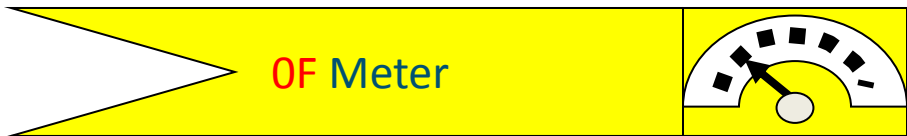
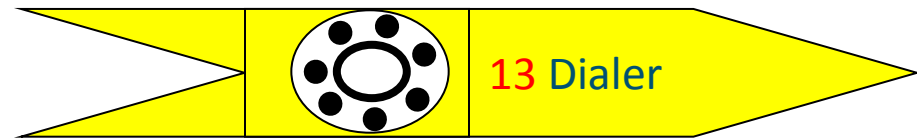
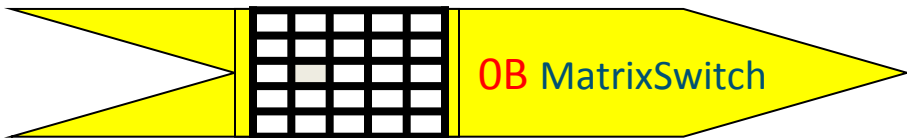
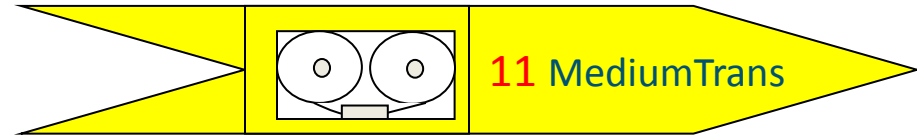
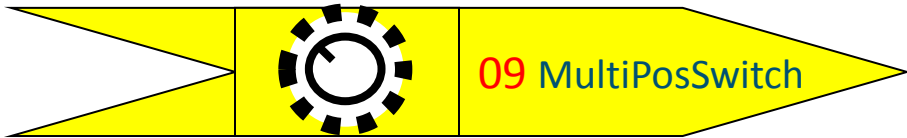
07 AnalogControl

04 Data Ch.Tx



08 AnalogSensor

Object Symbols



Object Symbols

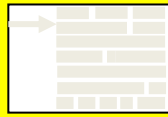
15 ListMemory



19 ToneGen.



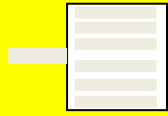
16 DataMemory



1C Counter/Timer



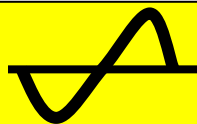
17 Motor



1D Clock



18 Synth/Tuner



Scenariobased STEERING CARD Templates:

(eDevice scenarios based on Limit values)

Steering cards are running in realtime but configuration parameters can be changed during execution time.

Steering cards (templates) executed by **eFolder-engine** and **eDevice-engine** in the **SUPER STRUCTURE PORTAL**

STEERING CARD examples:

- Person tracing (GPS)
- Fall/ Movement (GPS , Gyro, IR-timer)
- Medication (Callender, Time controlled medication)
- Access Control (Monitoring and audio messaging)
- Condition monitoring (Angina, Diabetes,..)
- Social safety (Family contacts, Necklace Alarming unit)
- Object tracing

Templat-Eksempel:

Styrekort : Sporing av Anna

Browser: <http://www.eprforum.no/eldreomrg> | EPR Forum :phone +47 22236...

Innlogget: hans@iti.as | Mappeobjekt: **Anna Skogsbygda** | Fase: **Omsorgsbolig** | Styrekort: **Sporing** | **Editor**

Siste posisjon 😊 | Tid: 18:30 2/10-10 | 59°57'49.53"N | 10°44'0.34"E | Referanse/Bosted: 📍

Storkenebbveien 21, 0860 Oslo

Sporing pågår | GPS-nr 40111111

Tlf. varsling | [dropdown]

SMS varsling | 40291180 | [dropdown]

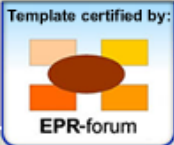
e-Post varsling | hans@iti.as | [dropdown]

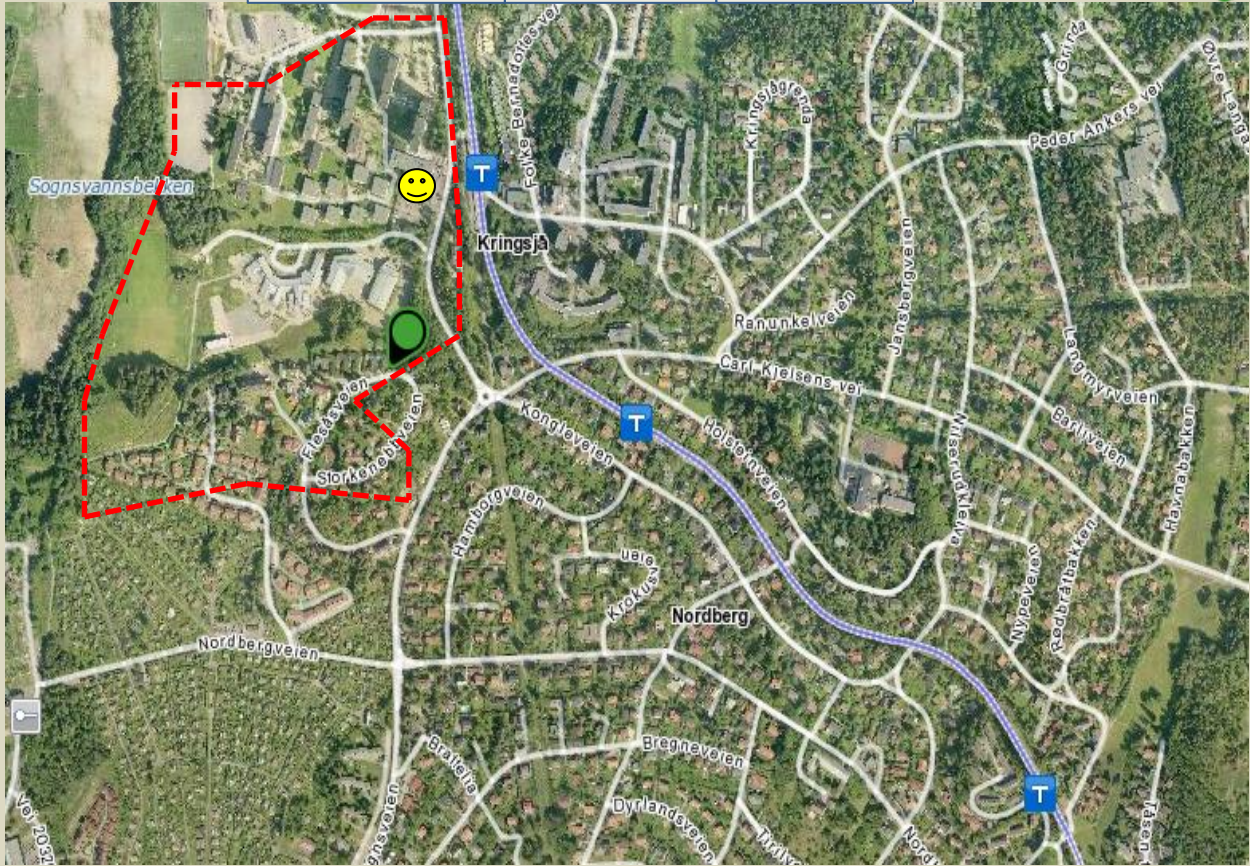
Varslingsbeskjed:
Anna har gått utenfor sitt område. Følg med på hennes posisjon og rykk ut for å hente henne!

Tilknyttet Styrekort: **Alarminnstruks**

Styrekortsymboler:

- Områdegrense
- 📍 Referanse/Bosted
- 😊 Innenfor området
- 😞 Utenfor området

Template certified by: 



Windows taskbar: Hermix - H... | Nyheter - ... | Infranomic... | SOA-eldre... | Sporing | Innboks - h... | EPR Forum ... | Fireworks - ... | NO | 17:24

Templat-Eksempel:

Styrekort : Fall/Bevegelse av Anna

Browser: <http://www.epforum.no/eldreomorg> | EPR Forum : phone +47 22236...

Innlogget: hans@iti.as | Mappeobjekt: **Anna Skogsbygda** | Fase: **Omsorgsbolig** | Styrekort: **Fall/Bevegelse** | [Editor](#)

Siste bevegelse: **Tid: 11:35 2/10-10** | Sensor: **Software 2** | Δt timer dag: ****:**** | Δt timer natt: **03:21** | Referanse/Bosted: **Storkenebbveien 21, 0860 Oslo**

Navigation: << Work Office Office Video 1 Video Test form Nevermind >> | eDevice | Logout

Refresh | Motion History | Info Area

Last Motion: 11:35 | Motion - Software 2

Connection status:

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Varslingsbeskjed Fall:
Anna Fallalarm aktivert. Siste bevegelse registrert av sensor: ***** kl:**:**

Tilknyttet Styrekort: [Alarminnstruks](#)

Varslingsbeskjed Bevegelsestimer:
Anna Bevegelsestimer aktivert. Siste bevegelse registrert av sensor: ***** kl:**

Tilknyttet Styrekort: [Alarminnstruks](#)

Fall/Bevegelse symboler:
😊 Normalt/OK
☹ Alarm

Template certified by:

Templat-Eksempel:

Styrekort : Medisinering av Anna

http://www.eprforum.no/eldreomorg EPR Forum :phone +47 22236...

Innlogget: hans@iti.as Mappeobjekt: **Anna Skogsbygda** Fase: **Omsorgsbolig** Styrekort: **Medisinering** Editor

Siste medisinerings: 😊 Tid: **18:00 2/10-2010** Referanse/Bosted:

DAG:

DATO:

KL: 🌙

Neste medisinerings: 😊 Tid: **21:00 2/10-2010**

Medisinering 21:00 2/10-2010
1 tablett blodtrykksmedisin
½ tablett skjelvetablett
2 tabletter sovemedisin

Medisinering

Tlf. varsling

SMS varsling

e-Post varsling

Automatisk varslingsbeskjed:
Anna du har ikk tatt medisinen sin !
Gå til kalenderen ved medisinerings-enheten og ta medisinen din!

Δt Avvik medisin

Tilknyttet Styrekort: Alarminstruks

Styrekortsymboler:
😊 Ok medisinerings
😊 Tid for medisinerings
😞 Glemt medisinerings

Template certified by:
EPR-forum

Templat-Eksempel:

Styrekort : Adgangskontroll av Anna

http://www.eprforum.no/eldreomorg EPR Forum : phone +47 22236...

Innlogget: hans@iti.as Mappeobjekt: **Anna Skogsbygda** Fase: **Omsorgsbolig** Styrekort: **Adgangskontroll** Editor

Status: **Inne** Siste døråpning: **Tid: 7:19 2/10-10** Av: **(RFID) Anna Skogsbygda** Referanse/Bosted: **Storkenebbveien 21, 0860 Oslo**

Work Office Office Video 1 Video Test form Nevermind eDevice Logout

Office Door Camera, fps:3 REC

Toggle
On
Off
Relay History
Card Action Log
Add to Replay

Aktiv Adgangskontroll **Inngangsdør**

Aktiverings-enheter:
 RFID-nummere: **Anna Skogsbygda**
 Mobil-nummere: **40291180**

Forlat Bolig aktiviteter:
Høytalerbeskjed når vinduer/dører er åpne:
Anna du forlater nå din bolig men du må lukke ***** før du forlater huset ditt.

Høytalerbeskjed når ok:
Anna du forlater nå din bolig. Klokken er **:**. Alarmsystemet aktiveres og Enøk-programmet starter.

Aktiver sporing: **Anna Skogsbygda**

Tilknyttet Styrekort når uvedkommende: Alarminnstruks
(Bevegelse inne når UTE-status. Inngangsdør åpnet uten godkjent ID etc)

Connection status: ■ ■ ■ (c) Copyright IT&Integration AS | www.iti.as

Template certified by:
EPR-forum

Hermix - H... Nyheter - ... Infranomic... Infranomic... SOA-eldre... Sporing Innboks - h... EPR Forum ... Fireworks - ... NO 17:24

Templat-Eksempel:

Styrekort : Tilstandskontroll av Anna

Browser: <http://www.epforum.no/eldreomorg> | EPR Forum : phone +47 22236...

Innlogget: hans@iti.as | Mappeobjekt: **Anna Skogsbygda** | Fase: **Omsorgsbolig** | Styrekort: **Tilstandskontroll** | **Editor**

Siste grenseovertrjedelse: **Tid: 11:35 2/10-10** | Sensor: **Temperatur** | Grense: **38 °C** | Referanse/Bosted: **Storkenebbveien 21, 0860 Oslo**

Navigation: << 1.etg 2.etg Scripts Log History >>

Logout: eDevice

Cancel

BLODTRYKK
TEMPERATUR
INSULIN
HERTEFREKVENSS

<input checked="" type="checkbox"/>	Blodtrykk	Grense: ***
<input checked="" type="checkbox"/>	Temperatur	Grense: ***
<input checked="" type="checkbox"/>	Blodtrykk	Grense: ***
<input checked="" type="checkbox"/>	Temperatur	Grense: ***
<input type="checkbox"/>	Tlf. varsling	
<input checked="" type="checkbox"/>	SMS varsling	40291180
<input checked="" type="checkbox"/>	e-Post varsling	hans@iti.as

Varslingsbeskjed Fall:
Anna *****grenseverdi oversteget ***** kl.*****

Tilknyttet Styrekort: **Alarminstruks**

Template certified by: **EPR-forum**

Connection status: | (c) Copyright IT&Integration AS | www.iti.as | 17:24

Templat-Eksempel:

Styrekort : Sosial Trygghet for Anna

Browser: <http://www.eprforum.no/eldreomorg> | EPR Forum : phone +47 22236...

Innlogget: hans@iti.as | Mappeobjekt: **Anna Skogsbygda** | Fase: **Omsorgsbolig** | Styrekort: **Sosial Trygghet** | **Editor**

Tlf. STATUS: **Hans** | Siste Telefon: **Tid: 11:35 2/10-10** | Navn: **Hans** | Referanse/Bosted: **Storkenebbveien 21, 0860 Oslo**

Navigation: << Work Office Office Video 1 Video Test form Nevermind >> | eDevice | Logout

Hans | **Henrik** | **Jonas**

Fastlege | **Sykepleier**

Pågående Tlf: 

Smykkesender ID: Anna (GS4) | **Smykkesender-varsling:**

- Tlf. varsling: 22236230
- SMS varsling: 40291180
- e-Post varsling: hans@iti.as

Smykkesender-beskjed: Anna har aktivert sin smykkesender og ønsker kontakt kl:***

Tilknyttet Styrekort: **Alarminnstruks**

Lyd **Rec**

Connection status:  | (c) Copyright IT&Integration AS | www.iti.as | Template certified by: 

Templat-Eksempel:

Styrekort : Sporing av gjenstander for Anna

Browser: <http://www.eprforum.no/eldreomorg> | EPR Forum : phone +47 22236...

Innlogget: hans@iti.as | Mappeobjekt: **Anna Skogsbygda** | Fase: **Omsorgsbolig** | Styrekort: **Spring Gjenstander** | **Editor**

Siste sporing: Tid: **11:35 2/10-10** | Sensor: **Briller** | Referanse/Bosted: **Storkenebbveien 21, 0860 Oslo**

Navigation: << Work Office Office Video 1 Video Test form Nevermind >> | eDevice | Logout

Refresh | Motion History | Info Area

Last Motion: 11:35 | Motion - Software 2

Connection status:

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Sporede gjenstander: (Lyd/Lys)

<input checked="" type="checkbox"/>	Lommebok	☹	Tilkjenegi
<input checked="" type="checkbox"/>	Nøkkelknippe	☹	Tilkjenegi
<input checked="" type="checkbox"/>	Briller	☹	Tilkjenegi
<input type="checkbox"/>		☺	Tilkjenegi
<input type="checkbox"/>		☺	Tilkjenegi

Gjenstand mistet:

Anna mistet/finner ikke gjenstand !

Tilknyttet Styrekort: **Alarminnstruks**

Symboler:

- ☹ Aktivert gjenstand
- ☺ Passiv gjenstand

Template certified by:

Do we want vendor locking in our common and inclusive SOA community: e-Norway / e-Gov ????

COMPATABILITY of competing frameworks:

- **Apache SOAP / ZOPE** Open Source (PHP , Perl, Plone, mm)
- **Sharepoint / .Net** Microsoft
- **SunONE Open Net Environment** Sun Microsystems (J2EE)
- **WebSphere** IBM (J2EE)
- **WebLogic** BEA (J2EE)
- **MySAP** SAP (J2EE)
- **HP Web Services** HewletPackard (Apace SOAP (Cocoon2), J2EE)
- **Orbix E2A** IONA (J2EE)
- **Oracle Web Services** ORACLE (J2EE)
- **. MAC** Apple
- etc

