# Osram ICC Communication Flow Proposal

R1 20240905

# Option – XML Handshake

NSW Dispenser

SCC

Tester

Osram

Server Shared Drive

Simplified the communication structure to work on centralized XML files. The initiation is NSW Dispenser to Lot and Register Tile to the shared location. Upon testing, the registered files are updated with the new parameters. NSW will check for shared drive on 2nd pass for new dispense parameters.

All active components are independent generating or updating XML content on the shared drive.

Propose XML content as follows:

|  |  |  |
| --- | --- | --- |
| **Process** | **Dispenser** | **Osram** |
|  |  |  |
| Dispense:  Registration | If XML file not found:  Create Lot Folder.  Generate A12345678\_Disp1.xml with content:  <LotID>{LotID}</LotID>  <11Series>{11Series}</11Series >  <DAStart >{DAStart} </ DAStart >  <EmpID>{EmpID}</ EmpID >  <PanelID> A12345678 </PanelID>  <StartTime>(datetime)</ StartTime >  <EndTime>(datetime)</ EndTime >  <Weight1>0.501</ Weight1>  <Weight2>0.502 </ Weight2> |  |
| Weight Update |  | Generate A12345678\_Test1.xml with content:  <Header>{header}</Header>  <11Series>{11Series}</11Series >  <DAStart >{DAStart} </ DAStart >  <EmpID>{EmpID}</ EmpID >  <PanelID> A12345678 </PanelID>  <StartTime>(datetime)</ StartTime >  <EndTime>(datetime)</ EndTime >  <SetWeight1>0.510</ Weight1>  <SetWeight2>0.520 </ Weight2> |
| Dispense:  Pass2 | If A12345678\_Test1.xml file found:  Parse for SetWeight, update parametes and run.  Generate A12345678\_Disp2.xml with content:  <LotID>{LotID}</LotID>  <11Series>{11Series}</11Series >  <DAStart >{DAStart} </ DAStart >  <EmpID>{EmpID}</ EmpID >  <PanelID> A12345678 </PanelID>  <StartTime>(datetime)</ StartTime >  <EndTime>(datetime)</ EndTime >  <Weight1>0.510</ Weight1>  <Weight2>0.520 </ Weight2> |  |

# Option – OsramICC

## Architecture

NSW Dispenser

OsramICC

SCC

Tester

Host

OsramICC will be a host software installed and running on NSW Machine to manage the communication with internal Osram networked devices required to the feedback process operation.

OsramICC will host local mahine software using a local IP address 127.0.0.1 using Port 1118.

The SCC command cannot be implemented for ICC communication is simplified for efficient operation.

## List of Commands

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Process | Process Description | Command | Parameters | Direction | Examples |
| Lot Information | | | | | |
| Start New Lot | Operator Start Lot from OsramICC. | SNL | LotID = LotID of the current lot.  11Series = 11Series number  DAStart = DA Number  EmpID = Operator Employee ID  RecipeName = Name of recipe to load. | OsramICC > NSW | Format:  SNL;{LotID};{11Series};{DAStart};{EmpID};{Recipe}  Example:  SNL;A12345678;11123456789;DA123;1234;Recipe1 |
| Response Code  Response Description  0 – Success  >0 – Error Code and Description | NSW > OsramICC | SNL;{Response Code},{Description}  SNL;1;Invalid Lot ID |
| End Of Lot | Operator End Lot from NSW. | EOL | None | NSW > OsramICC | Format:  EOL |
| Response Code  Response Description  0 – Success  >0 – Error Code and Description | OsramICC > NSW | Format:  EOL;{Response Code},{Description}  Example 1:  EOL;0  Example 2:  EOL;1;Invalid Lot Number |
| Panel Information | | | | | |
| Register Panel Parameter | Machine load frame to process station and read panel 2D Code, prepare for dispensing. | RPP | PanelID – 2D Code of the current panel.  DW1 - Current dispensing weight of Pump 1.  DW2 - Current dispensing weight of Pump 2. | NSW > OsramICC | Format:  RPP;{PanelID};{DW1};{DW2}  Example:  RRP;A12345678;0.501;0.502 |
| Response Code  Response Description  0 – Success  >0 – Error Code and Description | OsramICC > NSW | Format:  RRP;{Response Code},{Description} |
| Update Panel Parameters | Response from OsramICC on the new parameters to use for the current panel. | UPP | PanelID – 2D Code of the current panel.  RunNo – The sequence of the run.  NDW1 - Current dispensing weight of Pump 1.  NDW2 - Current dispensing weight of Pump 2. | OsramICC > NSW | UPP;{PanelID};{1};{NDW1};{NDW2}  UPP;A12345678;1;0.500;0.502  First run, no volume adjustment, run using **Map 1**.  UPP;A12345678;2;0.510;0.522  Second run, run with new not volume using **Map 2**. |
| Response Code  Response Description  0 – Success  >0 – Error Code and Description | NSW > OsramICC | Format:  UPP;{Response Code},{Description}  Example: UPP,0 |

## Conditions:

1. **SNL** cannot be started until the current lot is ended by **EOL**.
2. **UPP** command is expected after **RPP**. If no response is received after a specified timeout, machine will prompt to retry.

## References

List of known SCC Commands

//Lot

public const string VC\_NEW\_LOT = "DMNL";//DMNL;LotID;11Series;DAStart;EmpID;Recipe\_1

public const string VC\_CHANGE\_RECIPE = "DMNR";//DMNR;Recipe

public const string DM\_ACK = "DMACK";

public const string VC\_ACK = "DMACK";

public const string DM\_REQ\_RECIPE = "DMREQR";

public const string DM\_ERROR = "DMERR";//DMERR;0;Error;1 (ErrCode;ErrDesc)

public const string DM\_LAuNCH\_PROG = "DMLPRG";

public const string DM\_END\_LOT = "DMEND";

public const string VC\_END\_LOT\_ACK = "DMVCACK";

//Disp Para

public const string VC\_REQ\_PARA\_INFO = "DMRVP";//DMRVP;1;1 (ParaOpt 1=FlowRate(mg),2=Press(psi),3=OpenTime(ms); StationNo)

public const string DM\_RESP\_PARA = "DMDVP";//DMDVP;3.0;3.0;1; (Para\_0..Para\_n; StationNo)

public const string DM\_REQ\_CHANGE\_PARA = "DMSVP";//DMSVP;3.0;3.0;1; (NewPara\_0..NewPara\_n; StationNo)

//Alert

public const string VC\_ALERT\_ON = "DMALRT";//DMALRT;1 0=OFF,1=ON

public const string DM\_ALERT\_ACK = "DMALRTC";

//Machine Status - uniDirection

public const string DM\_RUN = "DMRUN";//DMRUN;1 machine no

public const string DM\_STOP = "DMSTOP";//DMSTOP;1 machine no

public const string DM\_MC\_ERROR = "DMMERR";//DMERR;0;Error;1 (ErrCode;ErrDesc;StationNo)

public const string DM\_MC\_WARNING = "DMMWRN";//DMMWRN;0;Error;1 (WarnCode;WarnDesc;StationNo)

public const string DM\_PANEL\_COMPLETE = "DMDISC";//DMDISC;1;0 (StationNo; PanelID)

public const string VC\_PANEL\_COMPLETE\_ACK = "DMVDISC";//DMVDISC;1 (StationNo)

public const string DM\_PANEL\_REACH = "DMRCH";//DMRCH;1;0 (StationNo; PanelNo)

public const string VC\_PANEL\_REACH\_ACK = "DMVCRCH";//DMVCRCH;1 (StationNo)

//Disp Setting

public const string VC\_REQ\_SETTING = "DMRDP";

public const string DM\_RESP\_SETTING = "DMDP";//DMDP;3.0;3.0 (Para\_0..Para\_n, return all head in machine)

public const string VC\_NEW\_SETTING = "DMSDP";//DMSDP;3.1;3.1;1 (Para\_0..Para\_n;StationNo)

public const string DM\_SETTING\_DONE = "DMPSC";//DMPSC;1 (Para\_0..Para\_n;StationNo)

## Glossary

SCC – Sampling Color Correction.

ICC – Inline Color Correction.

NSW – Represent NSW equipment.

OsramICC – Osram user interface installed to NSW Equipment PC.

## Revision History

|  |  |  |
| --- | --- | --- |
| Revision | Name | Descriptions |
| 0 | KN | First draft for ICC Communication Protocol |

End of Document.