SIL2.2 Letter of Intent (V16, October 30, 2017)

This letter of intent is signed between

_____

hereafter Partner and the

Open Source Automation Development Lab (OSADL) eG, 69120 Heidelberg, Germany

hereafter OSADL as follows:

Original SIL2LinuxMP Project

The original SIL2LinuxMP project aimed at the certification of the base components of an embedded GNU/Linux RTOS running on a multi-core industrial COTS computer board. Base components are boot loader, root filesystem, Linux kernel and C library bindings to access the Linux kernel. With the exception of a minimal set of utilities to inspect the system, management files and start test procedures, user space applications are not included.

The certification procedure mostly follows the rule of "compliant non-compliant development" (3_S) and consists of two consecutive project periods of time. In the first period, arguments for the equivalence of a compliant development were collected and methods to supplement these arguments were developed where required. The resulting material is called "public part of the SIL2LinuxMP certification data package". In the second period, the developed material and methods were intended to be applied to the individually specified hardware and software components. In addition, it was planned to subject the platforms to extensive testing. Results from the generic testing of this period also were intended to go into the public part of the SIL2LinuxMP certification data package. Other data that are very specific and different for every set of requirements should be called "private part of the SIL2LinuxMP certification data package". It was estimated that every period has a duration of approximately one year.

The project was started on April 1, 2015 when the prerequisites for launching were fulfilled with four so-called Full Partners and eight so-called Reviewing Partners. According to the original schedule, a Go/NoGo meeting was held in March 2016; as a result of this meeting it was concluded that the data provided so far are promising in a way that justifies entering the second one-year period of the project.

Current status

As of December 2016, none of the envisaged hardware platforms and use case specifications are available, and it became evident that the contributions of the partners' personnel would not reach the estimated amount. As a consequence, the goal of the original SIL2LinuxMP project, i.e. to receive at least two certificates until March 31, 2017, could be reached as was announced in March 2016. It was, therefore, decided to append a further project period dubbed "SIL2.2" to prolong the project by 9 months resulting in a new estimated end of the project on December 31, 2017. In addition, the lacking partners' work contributions will be compensated by increasing the number of project staff. One new employee already started on November 1, 2016 and stay for 14 months, one will join the project on June 9, 2017 and stay for 12 months and one will be a part-time allocation of additional OSADL staff for the project coordination (estimated at 1.5 to 2 days/week) starting December 2016 and continuing through December 2017. This letter of intent was created with the intention to generate the funding of the named SIL2.2 project prolongation and intensification period.

As of March 31, 2017 the original cost sharing model outlined was not fulfilled, since only letters of intent in the total amount of 196,000 instead of the requested 312,000 euros were signed. However, one of the existing partners provided the funding to fill the monetary gap. After the legally binding confirmation was received that the difference in the funding model in the amount of 116,000 euros is made up by one of the existing partners, sufficient letters of intent could be signed so the cost sharing model was fulfilled and the SIL2.2 period of the SIL2LinuxMP project was launched on April 1, 2017.

Intent

Partners confirm, by signing this letter of intent, their interest in participating in the SIL2.2 prolongation period of the SIL2LinuxMP project of OSADL as a Full Partner, Reviewing Partner or as a contributing subcontractor of a Full or a Reviewing Partner.

Membership levels and changes

Based on recent communication with previous SIL2LinuxMP Full and Reviewing Partners and with some external companies, the following future membership levels and changes are conceivable:

- A number of Full Partners will continue at the same membership level.

- A previous Reviewing Partner may upgrade to Full Partner level, but must additionally cover the difference between the Reviewing and Full Partner level of the original SIL2LinuxMP project in the amount of 56,000 euros.

- Another company who is not yet involved in the SIL2LinuxMP project expressed its desire to join in as Full Partner. It must additionally cover the fee of a Full Partner of the original SIL2LinuxMP project in the amount of 64,000 euros.

- Several previous Reviewing Partners indicated that they would like to continue at the same membership level.

- One of the previous Full Partners decided to downgrade to Reviewing Partner level.

- Another company who is not yet involved in the SIL2LinuxMP may join in as Reviewing Partner. It must additionally cover the fee of a Reviewing Partner of the original SIL2LinuxMP project in the amount of 8,000 euros.

Cost sharing model

The following fees are charged for the participation at the SIL2.2 prolongation and intensification period of the SIL2LinuxMP project:

- Continuing Full Partner: 64,000 euros
- Upgrade from Reviewing Partner to Full Partner: 120,000 euros
- New Full Partner: 128,000 euros*
- Continuing Reviewing Partner: 4,000 euros
- Downgrade from Full Partner to Reviewing Partner: 4,000 euros
- New Reviewing Partner: 12,000 euros*

*Please note that a new Full or Reviewing Partner must join OSADL at least as Bronze member before membership in the SIL2.2 prolongation period of the SIL2LinuxMP project is possible.

The participation of Academic Partners and contributing subcontractors of a Full or a Reviewing Partner is free of charge.

The commitment made with this letter of intent is generally limited to the above given fees per partner.

Share of results a) – different from the rules in the original SIL2LinuxMP project

a) Full Partners agreed in the meeting on October 14, 2016 to pursue a joint use case which will be prepared by OpenTech, fully documented and fully released to Full Partners together with a reference hardware (current candidates include Intel x86-64 quad-core and Xilinx 64-bit UltraScale). Manufacturers of the reference hardware will be allowed to review and approve the use case before it is shared with the other partners, and may require confidentiality agreements to be in place prior to sharing the use case with the other partners.

Share of results b) to e) – same rules as in the original SIL2LinuxMP project

b) Reviewing Partners shall have the right to participate in the development of the overall safety arguments, claims and evidence base so to best suit their future needs. Reviewing Partners have the right to utilize the public part of the certification data package for their future certification efforts.

c) Partners shall be able to enter the agreement on a first-come, first-served basis. Early entered members shall be allowed to exercise their right of veto when a later entering member may con-

stitute unsolvable business conflicts, e.g. because very similar devices are to be developed for the same market.

d) The use of the certificate issued by TÜV Rheinland shall be limited to Full Partners and the initially defined requirements such as the hardware and software reference platforms.

e) The public part of the certification data package, i.e. general procedures and methods including software components developed during the SIL2LinuxMP project will be made publicly available at the end of the project under an Open Source or equivalent license. The private part of the certification data package, i.e. data that relate to the individually specified requirements including related claims, arguments and evidence may only be made publicly available, if the respective Full Partners agree on it.

Confidentiality – same rule as in the original SIL2LinuxMP project

No confidentiality requirements apply to the public part of the certification data package. The private part of the certification data package must be kept secret, if requested.

IP Issues – different from the rules in the original SIL2LinuxMP project

For purposes of this project, to the extent a Partner includes software in its materials included in the public part of the certification data package, such Partner agrees to license such software in a manner compliant with the Open Source Definition (OSD). In addition, each Partner understands that all materials that were included in the public part of the certification data package are intended to be made available in a manner compliant with the Open Source Definition (OSD), and will participate in this project in a manner consistent with that objective.

Agreed intent

By signing this letter of intent, Partners and contributing subcontractors of a Full or a Reviewing Partner agree to accept the above mentioned conditions as a final consortium agreement; withdrawal from this agreement is no longer limited to the previous condition

• The estimated minimum budget of at least 312,000 euros is not reached before March 31, 2017

since the total amount of 312,000 euros was reached and the SIL2.2 prolongation period of the SIL2LinuxMP project was launched on April 1, 2017.

Place of jurisdiction – same as in the original SIL2LinuxMP project

This letter of intent will be governed by the laws of Germany, except for its conflicts of laws principles. The place of jurisdiction for all disputes arising from or in connection with this letter of intent shall be Mannheim, Germany.

Requested SIL2.2 membership or contribution level (please tick)

Continuing Full Partner (Total amount of 64,000 euros due on June 9, 2017)

❑ Yes ❑ No

Upgrade from Reviewing Partner to Full Partner (Total amount of 120,000 euros due on June 9, 2017)

❑ Yes ❑ No

Newly joining Full Partner (Total amount of 128,000 euros due on June 9, 2017)

❑ Yes ❑ No

Continuing Reviewing Partner (Total amount of 4,000 euros due on June 9, 2017)

❑ Yes ❑ No

Downgrade from Full Partner to Reviewing Partner (Total amount of 4,000 euros due on June 9, 2017)

❑ Yes ❑ No

Newly joining Reviewing Partner (Total amount of 12,000 euros due on June 9, 2017)

❑ Yes ❑ No

Newly joining contributing subcontractor of a Full or a Reviewing Partner (free of charge)

❑ Yes ❑ No

Continuing Academic Partner (free of charge)

❑ Yes ❑ No

Newly joining Academic Partner (free of charge)

❑ Yes ❑ No

Signatures

Partner or contributor

_____   _____
(Name in block letters)   (Signature)

_____   _____
(Place)   (Date)

Open Source Automation Development Lab (OSADL) eG

_____   _____
(General Manager or   (Signature)
Member of the Board of Directors)

_____   _____
(Place)   (Date)

_____   _____
(Lead of the OSADL Safety-Critical Linux   (Signature)

Working Group: Nicholas Mc Guire)

_____   _____
(Place)   (Date)