

To Intellectual Property Authorities, pertinent Courts and Law Firms handling Intellectual Property Matters of and for the undersigned

POWER of ATTORNEY

The undersigned

ABB Technology Ltd
Affolternstrasse 44
CH-8050, Zürich, Switzerland

hereby makes, constitutes and appoints

Mr. Reino Savela, ABB AB
Intellectual Property
Ing. Bååths Gata 11
SE- 721 83 Västerås, Sweden

as its attorney-in-fact to file and prosecute applications for patents, utility models, trademarks, design patents, copyrights and topographies and otherwise obtain protection for the undersigned's intellectual property, and to maintain, and defend such intellectual property rights as well as to proceed against intellectual property rights of third parties. The above person shall be empowered to undertake all necessary acts for effectuating the foregoing.

The above person is empowered to take back and to assign – for corrective purposes, or pursuant to instructions from the undersigned and/or an agreement executed by the undersigned – filed applications as well as granted intellectual property rights among companies belonging to the ABB Group.

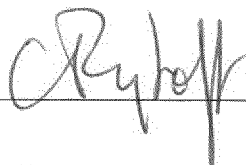
The above person is empowered to act as attorney-in-fact for the undersigned before intellectual property authorities, such as Patent- and Trademark Offices, as well as before pertinent courts in all matters of intellectual property, including acquiring, defending, maintaining and asserting intellectual property rights of the undersigned and proceeding against intellectual property rights of third parties.

The above person is further empowered to grant substitute powers on behalf of the undersigned for representing the undersigned before intellectual property authorities, such as Patent- and Trademark Offices, as well as before pertinent courts for acquiring, defending, maintaining and asserting intellectual property rights of the undersigned and proceeding against intellectual property rights of third parties for a scope no greater than that granted within this power of attorney. The above person shall provide the undersigned with copies of any such substitute powers granted unless such substitute powers are explicitly limited to individual intellectual property rights.

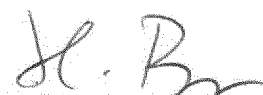
This power of attorney replaces all former powers of attorney relating to intellectual property of the undersigned that were issued to the above person by the undersigned.

This power of attorney and/or any substitute powers can be revoked at any time by the undersigned upon written notice. This power of attorney automatically expires without notice when the above person leaves the employment of ABB AB.

ABB Technology Ltd



Name: Claes Ryttoft



Name: Hansjörg Berger

Date: 2014-09-08

Date: 2014-09-08

To Intellectual Property Authorities, pertinent Courts and Law Firms handling Intellectual Property Matters of and for the undersigned

POWER of ATTORNEY

The undersigned

ABB Switzerland Ltd, registered in and under the laws of Switzerland

hereby makes, constitutes and appoints

Reino Savela
ABB AB, Legal & Integrity, Intellectual Property
SE-721 83 VASTERAS
SWEDEN

as its attorney-in-fact to file and prosecute applications for patents, utility models, trademarks, design patents, copyrights and topographies and otherwise obtain protection for the undersigned's intellectual property, and to maintain, and defend such intellectual property rights as well as to proceed against intellectual property rights of third parties. The above person shall be empowered to undertake all necessary acts for effectuating the foregoing.

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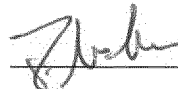
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This power of attorney shall come into force retroactively as of 14 June 2016.



Name: Oliver Albrecht Rhomberg



Name: Judith Nolte

Date: 22 June 2016

Date: 22 June 2016