

Number portability guide

Introduction

This guide is intended as a quick and easy reference work for operators on the Danish market. Its purpose is to give the reader an overview of useful subjects, terms, and resources that are relevant with regards to number porting and implementation thereof. It is important that the reader keeps in mind that the guide is an overview, whose purpose is quick and easy. Therefore, it cannot be read in a vacuum. And it does not replace the sources that it uses or references.

The guide is not authoritative, and it does not take precedence over the sources upon which it is built. As such, in case of a discrepancy between the guide and, as an example, Rules & Procedures for Number Portability it is Rules & Procedures for Number Portability that takes precedence over the guide.

Subjects

The section reviews some of the topics that have been assessed to be particularly relevant. Especially for new operators who need to get started with number porting on the Danish market.

Contact information for the relevant party/parties can be found in the Resource overview, where reference will be made to.

Subject	Description
Entering into an agreement with OCH A/S	<p>An agreement must always be entered into with OCH A/S.</p> <p>Without an agreement with OCH A/S, it is not possible to be registered as a Range Holder on numbers that have been assigned by the authorities.</p> <p>It is also not possible to carry out number porting.</p> <p>When entering into an agreement with OCH A/S, terms and conditions will be determined. Including, but not limited to, CPS code, type of connection, billing for the selected connection type as well as transactions and access to OCH Online.</p>

	<p>Further information can be found at www.och.dk.</p> <p>Contact information for OCH A/S can be found in the Resource overview, where reference is made to</p>
Direct connection	<p>Direct access to the OCH system via SOAP.</p> <p>The operator can send and receive transactions.</p> <p>Access to OCH Online.</p> <p>Access to statistical reports.</p> <p>Possibility of resale of OCH services by prior agreement.</p>
Indirect connection	<p>Indirect access to the OCH system via a third party with a direct connection.</p> <p>The operator cannot send and receive transactions himself but must do this through a third party.</p> <p>Access to OCH Online.</p> <p>Access to statistical reports.</p>
Passive connection	<p>Passive access to the OCH system, enabling the receipt of updates. It is not possible to send transactions.</p> <p>Access to OCH Online.</p>
Implementation date	<p>The date the operator wants its agreement with OCH A/S to be implemented.</p> <p>OCH A/S must be given at least 14 days' notice.</p>
NP agreement and bilateral agreements	<p>Once you have entered into an agreement with OCH A/S and it has been implemented, you can technically carry out number porting.</p> <p>In addition to this, you must also enter into an agreement on number porting with the other operators on the Danish market.</p> <p>The agreement consists of the following:</p> <ul style="list-style-type: none"> - Industry agreement (Voluntary accession) - NP agreement entered into with all operators

	<ul style="list-style-type: none"> - Appendix 1, which is a price agreement that must be completed and sent with the NP agreement - Appendix 2, which are the ethical guidelines that must be sent with the NP agreement <p>In addition to the primary NP agreement, it is also possible to enter into bilateral agreements on the following:</p> <ul style="list-style-type: none"> - ICC validation - Customer ID validation - Electronic power of attorney for businesses <p>Note that the use of electronic power of attorney for private customers is an implicit part of the NP agreement. It is thus only for business customers that a bilateral agreement on electronic power of attorney is necessary if one is desired.</p> <p>The mentioned agreements can be found at www.teleindu.dk, where further information can also be found.</p> <p>Contact information for the Telecom Industry Association can be found in the Resource overview, where reference is made to.</p>
<p>Bilateral agreement on ICC and Customer ID solution</p>	<p>Makes it possible to replace sending NP power of attorney with validation on ICC number for mobile and Customer ID for landline.</p> <p>Regardless of a concluded bilateral agreement on ICC validation, a power of attorney must always be obtained from the legal owner of the telephone number before a number porting can be started.</p> <p>Note that a donor operator may have customer segments that are exempt from using ICC and Customer ID. Even if an agreement to this effect has been entered into between the receiving and donating operator.</p>
<p>Bilateral agreement on electronic power of attorney for businesses</p>	<p>Makes it possible to use electronic power of attorney in connection with number porting of business customers.</p> <p>Note that a donor operator may have business customer segments that are exempt from the use of electronic power of attorney. Even if an</p>

	<p>agreement to this effect has been entered into between the receiving and donating operator.</p>
<p>Own number series</p>	<p>If you want your own number series(s), you must apply to the supervisory authority, which is currently the Agency for Data Supply and Infrastructure.</p> <p>https://sdfi.dk/digital-infrastructure/telefoni/numre</p> <p>An assigned number series can only be implemented in the OCH system when the following requirements are met:</p> <ul style="list-style-type: none"> - The number series is assigned to the operator by the Agency for Data Supply and Infrastructure - The CPS code the operator is assigned is active - The RI/CI code to be used is approved - The implementation request must be approved <p>A directly connected operator manages implementation in the OCH system himself. An indirectly connected operator cannot take care of implementation itself and the implementation is handled instead by the indirectly connected operator's network operator.</p> <p>All operators receive information about implementation of the series by e-mail so that they can each manage implementation in their own network.</p> <p>Note that the Number Type cannot deviate from the Danish numbering plan. This means that numbers that are GSM in the numbering plan cannot be changed to FIXED. And numbers that are FIXED in the numbering plan cannot be changed to GSM.</p>
<p>RI/CI</p>	<p>Application for, and approval of, RI/CI codes takes place via OCH Online.</p> <p>It takes 14 days to approve or reject a request for an RI/CI code.</p> <p>An approved RI/CI code can only be used for the number type it is approved for. That is, if an RI/CI code is approved for use with GSM, it cannot also be used for FIXED. If, as an operator, you have</p>

	<p>both GSM and FIXED assigned, it will be necessary to have separate RI/CI codes.</p> <p>Further information about RI/CI codes can be found in Rules & Procedures for Number Portability.</p>
<p>Contact details of active operators</p>	<p>As part of an operator entering into an agreement with OCH A/S, the operator must inform OCH A/S of how the operator can be contacted.</p> <p>The contact information that OCH A/S receives will be available to all affiliated operators via OCH Online.</p> <p>OCH A/S only updates the operator's contact information in connection with the implementation of the operator. After this, it is the operator's responsibility and duty to keep the information up to date.</p>
<p>Matters of doubt between two operators</p>	<p>Matters of doubt between two operators must, as a rule, be resolved by mediation between the operators. Alternatively, brought before the appropriate authority or court.</p>
<p>Matters of doubt between two operators – the role of the NPA working group</p>	<p>Members of TI can, under the auspices of the NPA working group, discuss rules and agree on changes and/or tightening of the applicable rules.</p> <p>Non-members of TI can approach the NPA working group about general issues which the working group can then discuss.</p> <p>The NPA working group, and its chairman, do not have a mandate to impose on an operator how he must interpret the industry's NP rules.</p> <p>Contact information for the Telecom industry, and the NPA working group, can be found in the Resources overview, where reference is made to</p>
<p>Matters of doubt between two operators – The role of OCH A/S</p>	<p>OCH A/S cannot mediate or draw conclusions in case of doubt regarding number porting, as the NP rules are regulated in the industry's NP agreements.</p> <p>The agreement between OCH A/S and the operator includes that the operator undertakes to comply with the rules applicable at any given</p>

	<p>time in the Rules & Procedures for Number Portability and the Transaction Document.</p> <p>OCH A/S is authorized to close the operator's connection to the OCH system if the Rules & Procedures for Number Portability and/or the Transaction Document are not complied with.</p> <p>Contact information for OCH A/S can be found in the Resource overview, where reference is made to</p>
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Definitions

The section contains an overview of frequently used terms and an associated explanation.

Term	Definition
CPS code	<p>A CPS code is a unique code that all operators are assigned by OCH A/S in connection with their creation in the OCH system. In addition to identifying the individual operator, the code also denotes what type of operator it is.</p> <p>An operator with a CPS code that follows the formula 010xx is a network operator.</p> <p>An operator with a CPS code that follows the formula 00xxx is a service operator with a direct connection to the system.</p> <p>An operator with a CPS code that follows the formula 08xxx is a service operator without direct connection to the system.</p> <p>An operator with a CPS code that follows the formula 09xxx is a passive operator.</p>
Customer ID	<p>Used in connection with porting landline numbers. Customer number, or account number, at the donor operator.</p> <p>If an agreement has been entered into between the receiving and the donating operator on the</p>

	<p>use of Customer ID, in connection with porting landline numbers, exchange of this replaces the sending of a power of attorney to the donor operator.</p> <p>Note that a donor operator may have customer segments that are excluded from use of Customer ID. Even if an agreement to this effect has been entered into between the receiving and donor operator.</p> <p>It is an operator's own responsibility to be aware of the agreements it has entered into with other operators and to act in accordance with them. OCH A/S has no insight into this and cannot help with information on this. OCH A/S cannot assist if there is a dispute between the parties.</p>
FIXED	Landline telephony. Including VoIP and non-geographic 70/80/90 numbers.
GSM	Global System for Mobile Communications. Mobile telephony.
ICC/ICCID/Sim card number	<p>Integrated Circuit Card ID. Used in connection with porting mobile numbers.</p> <p>If an agreement has been entered into between the receiving and the donating operator on the use of ICC, in connection with porting of mobile numbers, this exchange replaces the sending of a power of attorney to the donor operator.</p> <p>Note that a donor operator may have customer segments that are exempt from using ICC. Even if an agreement to this effect has been entered into between the receiving and donor operator.</p> <p>It is an operator's own responsibility to be aware of the agreements it has entered into with other operators and to act in accordance with them. OCH A/S has no insight into this and cannot help with information on this. OCH A/S cannot assist if there is a dispute between the parties.</p>
ICH (Internal Clearing House)	<p>Common term for the application that a directly connected operator uses to communicate with OCH's system.</p> <p>An ICH can be self-developed or purchased from an ICH supplier.</p>

<p>Interconnect</p>	<p>Exchange of traffic between two networks.</p> <p>Traffic can be exchanged directly between two operators or via a third party if the operators involved do not have an interconnect agreement with each other.</p> <p>Example:</p> <p>Operator A wants to send traffic to operator B but does not have an interconnect agreement with this operator. A instead sends its traffic through operator C, who has an interconnect agreement with B.</p>
<p>NO (Network Operator)</p>	<p>An operator with its own network. A network operator will always have a CPS code that follows the formula 010xx.</p>
<p>Number Type</p>	<p>The value indicates which type of number it is.</p> <p>GSM for mobile number.</p> <p>FIXED for regular landline, VoIP and non-geographic 70/80/90 numbers.</p> <p>It is not permitted to change the Number Type in connection with a porting.</p> <p>A number can only have the Number Type assigned to it by the authorities and which appears in the Danish numbering plan.</p>
<p>OCH A/S</p>	<p>Operators Clearing House A/S.</p> <p>The company owns and operates the software and hardware platform that directs communication between the individual operators in connection with number porting in Denmark.</p> <p>As an operator on the Danish market, you must have an agreement with OCH A/S. Otherwise, it will not be possible to be assigned number resources by the authorities or perform number porting.</p> <p>Contact information for OCH A/S can be found in the Resource overview.</p>
<p>OCH Online</p>	<p>Online portal where, as a customer of OCH A/S, you can find useful information and tools.</p>

	<p>Via OCH Online, you have, among other things, the opportunity to:</p> <ul style="list-style-type: none"> - See news from OCH A/S - Find information about operational disruption at OCH A/S or other operators. - See the status of all numbers in the Danish numbering plan. - See the status of your own number porting's. - Manage your own users. - Manage your operator profile. <p>Not all agreements with OCH A/S include access to OCH Online.</p>
The OCH System	The software and hardware platform owned and operated by OCH A/S. And which is used for the administrative processing of number porting in Denmark. The system also maintains the Danish numbering and routing plan.
NPA (Number Porting Responsible)	<p>Working group under the Telecom Industry.</p> <p>The working group maintains the Rules & Procedures for Number Portability and the Transaction Document.</p> <p>The working group is also responsible for decisions and implementation of matters relating to number porting.</p> <p>The working group refers to the steering group, which, with the exception of the Telcom Industry Association's board of directors, is the Telecom Industry Association's highest authority.</p> <p>Further information, including contact information, on the Telecom Industry Association can be found in the Resources overview.</p>
R&P (Rules & Procedures for Number Portability)	Administrative document that describes how the processing of number porting must be handled in Denmark. All operators are obliged to comply with the rules and procedure in the document.
SO (Service Operator)	<p>Unlike a network operator, a service operator does not have its own network. Instead, the service operator uses a network operator's network.</p> <p>A service operator with a direct connection has a CPS code that follows the formula 00xxx.</p>

	A service operator without its own connection has a CPS code that follows the formula 08xxx.
SOAP (Simple Object Access Protocol)	API, Application Program Interface, used for communication between an ICH and the OCH system.
TI (Telecom Industry)	Industry association under the Danish Industry association.
The Transaction Document	<p>Technical document detailing the Rules & Procedures for Number Portability.</p> <p>The document also constitutes the technical requirements specification for the OCH system.</p> <p>All operators are obliged to comply with the rules in the document.</p>
Range Holder	<p>A range holder is the operator who has been assigned a given block of numbers by the authorities.</p> <p>A range is always consecutively starting from X to Y, where X and Y are respectively the first and last number in the relevant range.</p>
Donor Operator	The donor operator, in connection with a number porting, is the operator who has the active customer relationship. That is, where the number is active before a number porting is completed.
Receiving Operator	The receiving operator, in connection with a number porting, is the operator to which the customer relationship is to be transferred. That is, where the number is active after a number porting has been completed.

Resource overview

The section is an overview of resources that are necessary to be aware of in connection with carrying out number porting on the Danish market.

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