

Sami language support in Windows XP

Starting with Service Pack 2 for Windows XP, Microsoft fully supports the Sami languages in Finland, Norway and Sweden according to the requirements of Sami Parliamentary Council documents Sámediggi 01/850-51, 01/850-86 and 04/560-1 (published by the Norwegian Sami Parliament).

The support is implemented on "extended level", i.e. including Inari and Skolt Sami. It is based on multiple-octet coding in Unicode, which is coding-wise identical to ISO/IEC 10646. For keyboards, both the "Majority-language with Sami" and the "Sami-language" layouts of Sámediggi 01/850-51 and 01/850-86 have been implemented. The layouts are illustrated in Annex A. (The Sami layouts are practically the same as those in the consultancy-developed Windows 95/98/ME "plug-in" software "Levi", which is "free-ware", but **not** supported by Microsoft.)

As regards fonts, a few Skolt Sami letters are missing in some of the Microsoft fonts shipped with Windows itself. All Sami letters – including the Skolt Sami ones – are however available in the fonts **Lucida Sans Unicode**, **Microsoft Sans Serif** and **Tahoma**. They are also available in the special Unicode version of **Arial** shipped with later Office packages.

The Sami-language support in XP Service Pack 2 applies to the Windows platform itself. The support is utilised in Microsoft application software, e.g. Word, but some defects exist. For instance, "long date" (i.e. with the name of the month) in Office does not completely conform to Sámediggi 04/560-1. Some limitations in application software also apply to Skolt Sami letters. These defects and limitations should become rectified in future "Service Packs", or in new software versions. Support for Sami in Windows application software from other vendors than Microsoft naturally varies,

The language support is of interest to primarily two user groups:

Sami-speaking Windows users generally need to conveniently write both their own Sami language and their national language, i.e. Finnish, Norwegian or Swedish, or more than one of them. After installing Service Pack 2, these users should therefore set up Windows for multi-language handling, and select the keyboard layout(s) most suitable to them.

Windows users in Public Authorities mostly work in their national language, but may need access to the specifically Sami letters. In this case, multi-linguality is not needed, only set-up of keyboard layouts for "Majority-language with Sami", i.e. Finnish, Norwegian or Swedish layout with Sami letters.

Language and keyboard set-up is well documented in Windows Help, but some users may want a description adapted to the Sami language situation. This document is intended as such a description for the two user groups, i.e. for Sami-speaking as well as for Authorities' Windows users.

The document deals however only with a base-level set-up. Advanced users may therefore note some simplifications and/or exclusions in the text. Only settings in Windows itself are dealt with, not what may possibly be needed in application software.

Windows language versions

Windows is available in various language versions, separately or pre-installed (OEM). The versions have essentially identical functionality, but with differing language used for prompts and in menus etc. For instance, in a Swedish version of Windows the national language is given as "Svenska" in menus, while in an English version the language name in the corresponding situation is "Swedish". Some default settings also differ between language versions.

In the following text a US English version of Windows has been used for illustration. Corresponding screen displays for Finnish, Norwegian and Swedish national versions will differ somewhat, not only as regards texts but also in the positioning of icons, since Windows uses alphabetical ordering for them. Possibly the national versions may also differ in the set-up procedure from the English one exemplified here. Feedback on this issue to info@lwp.se will be highly appreciated!

Installation procedure

For access to Sami language support in Windows XP, Service Pack 2 must be installed. The installation may be automatic, if automatic update is enabled, or it may require downloading from Microsoft, or it may be performed from a CD.

Problems may be encountered if a user's XP system has earlier been modified with the special keyboard driver package for Windows 2000 developed for the TietoEnator-supplied office system of the Norwegian Sami Parliament, and made available for downloading from its website. It should be noticed that such a modification could have been performed unknown to the final Windows user, e.g. as part of the original Windows installation in a newly-purchased computer, or by a PC support team. Also, if the XP system is an upgrade from an earlier Windows 2000 system, the keyboard driver modification could have been "inherited" from it.

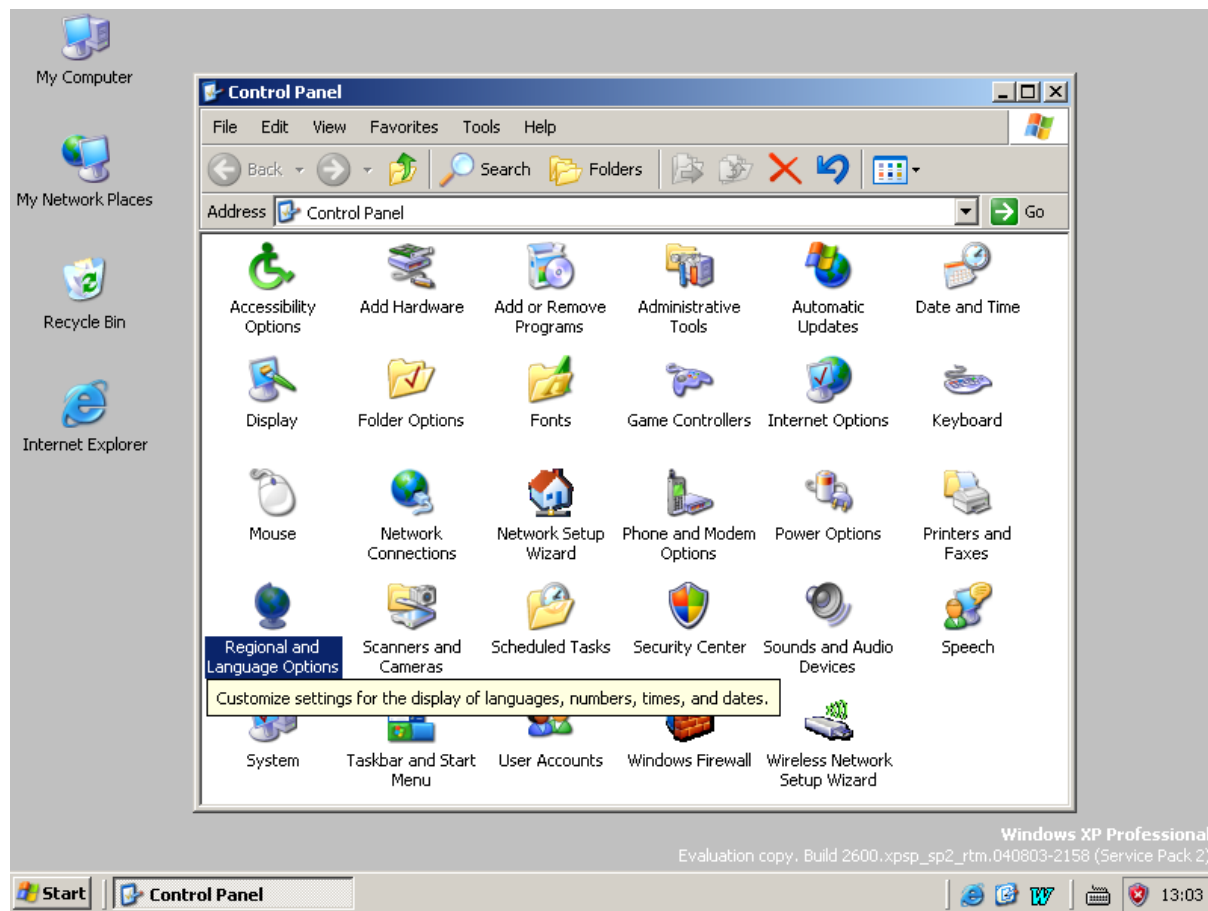
Activation of complete Sami-language support is described in pages 3–11 of the following text. The less complex procedure of **installing Sami-including keyboard layouts**, primarily for users in Authorities, is described in pages 12–15.

For the illustrations in the text, an evaluation version of Windows XP Professional has been used, set up for Swedish language and keyboard support, and upgraded by a Service Pack 2 on CD. Other system combinations may differ in detail (Professional/Home Edition; with/without Service Pack 1; Service Pack 2 from Internet/CD).

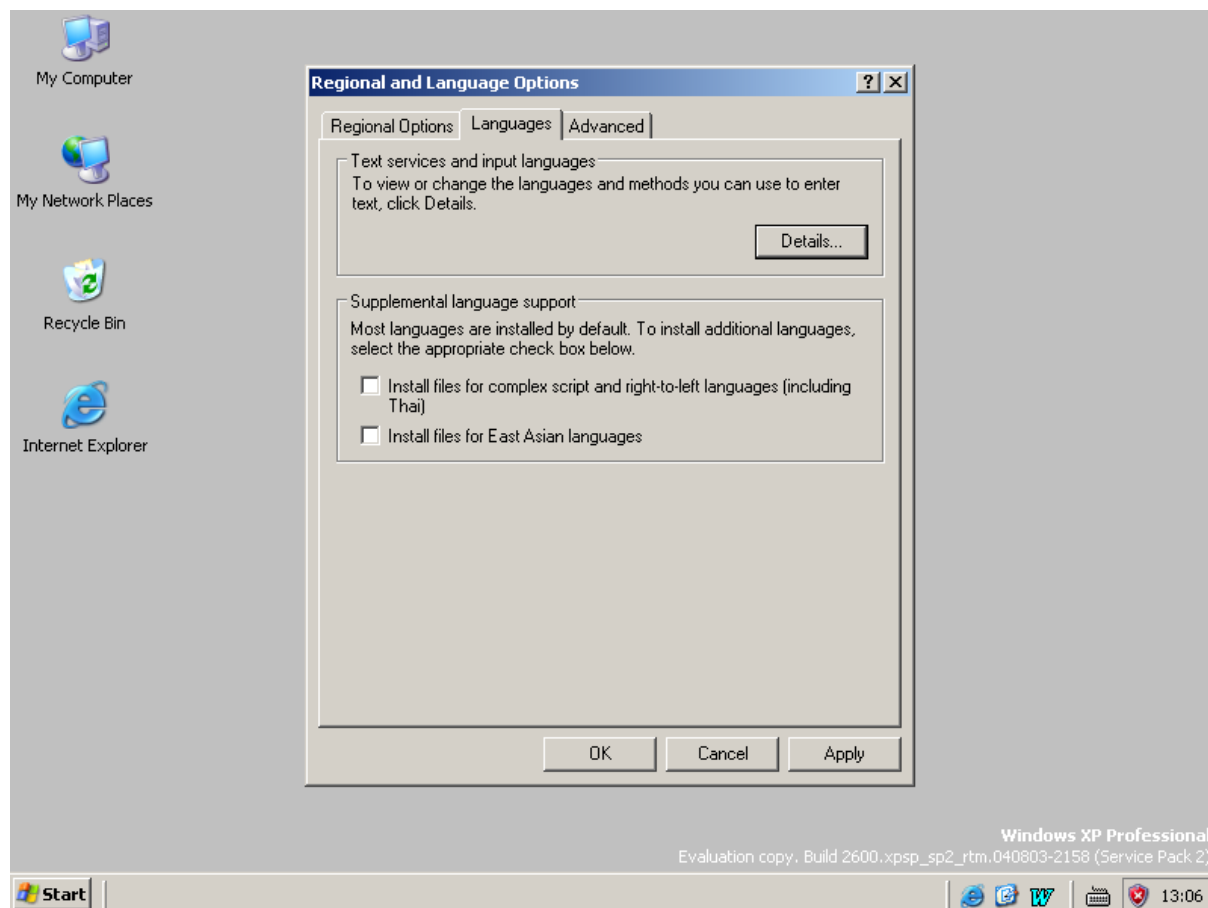
On page 16 the different keyboard layout alternatives are discussed in detail, and also a somewhat deeper technical description is given.

Activation of complete Sami-language support

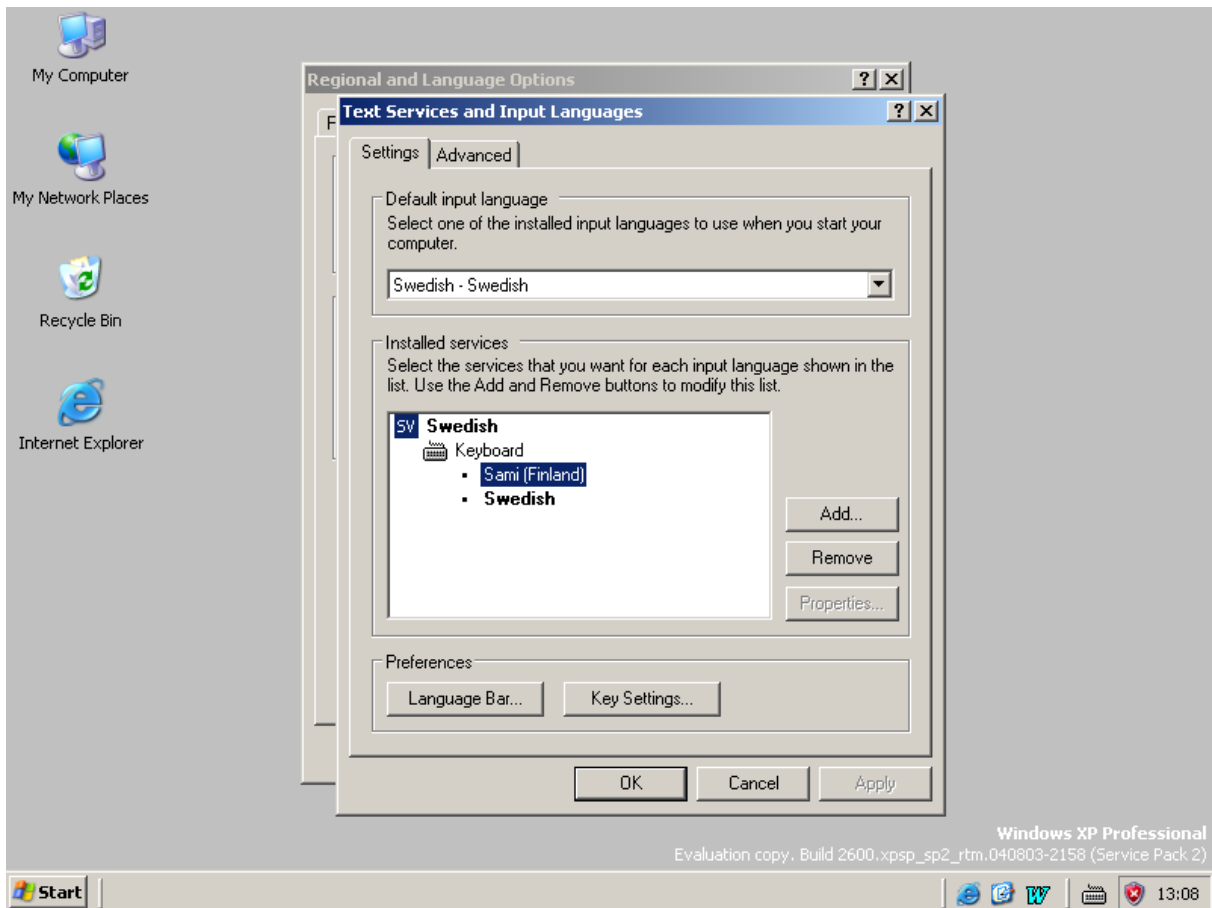
Service Pack 2 must be installed. Open **Control Panel**.



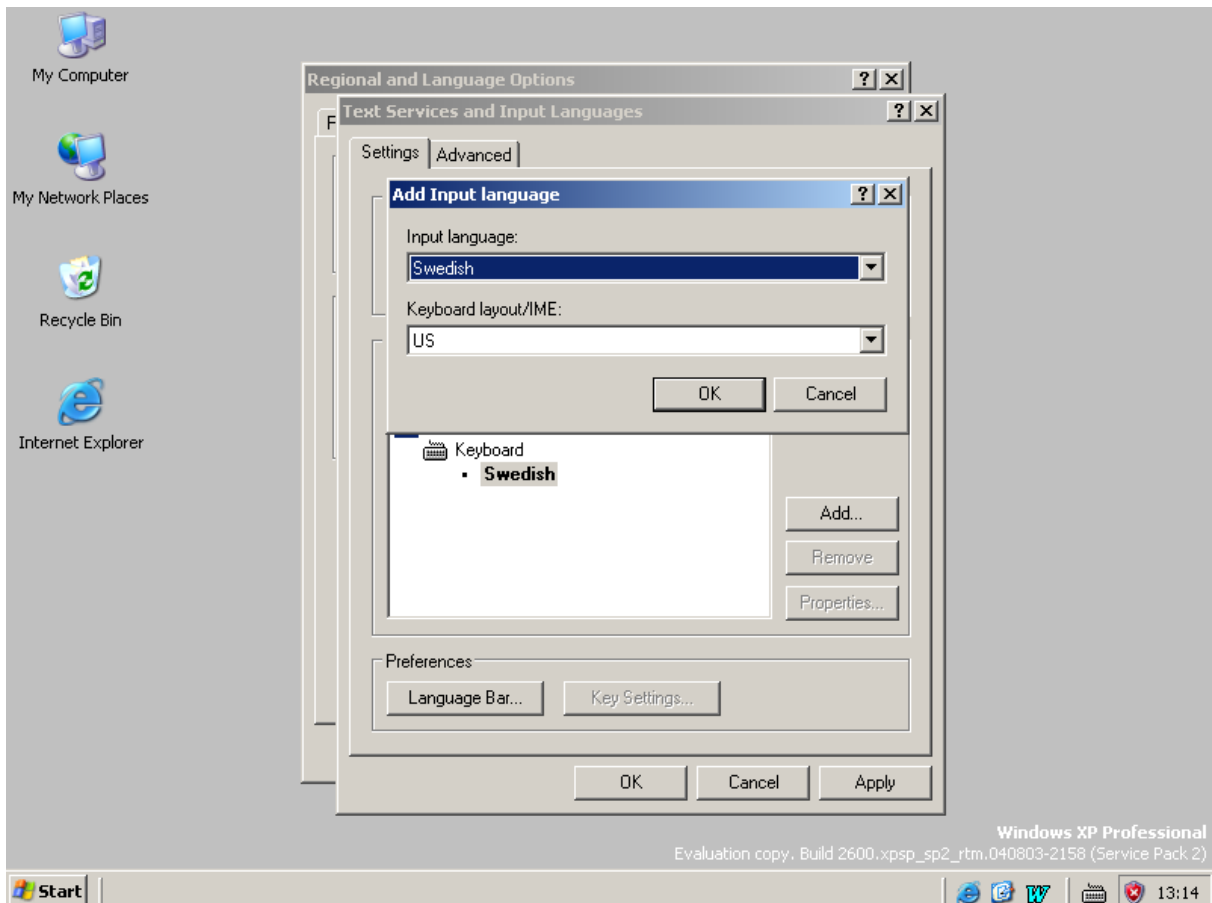
Open (double-click) **Regional and Language Options**.



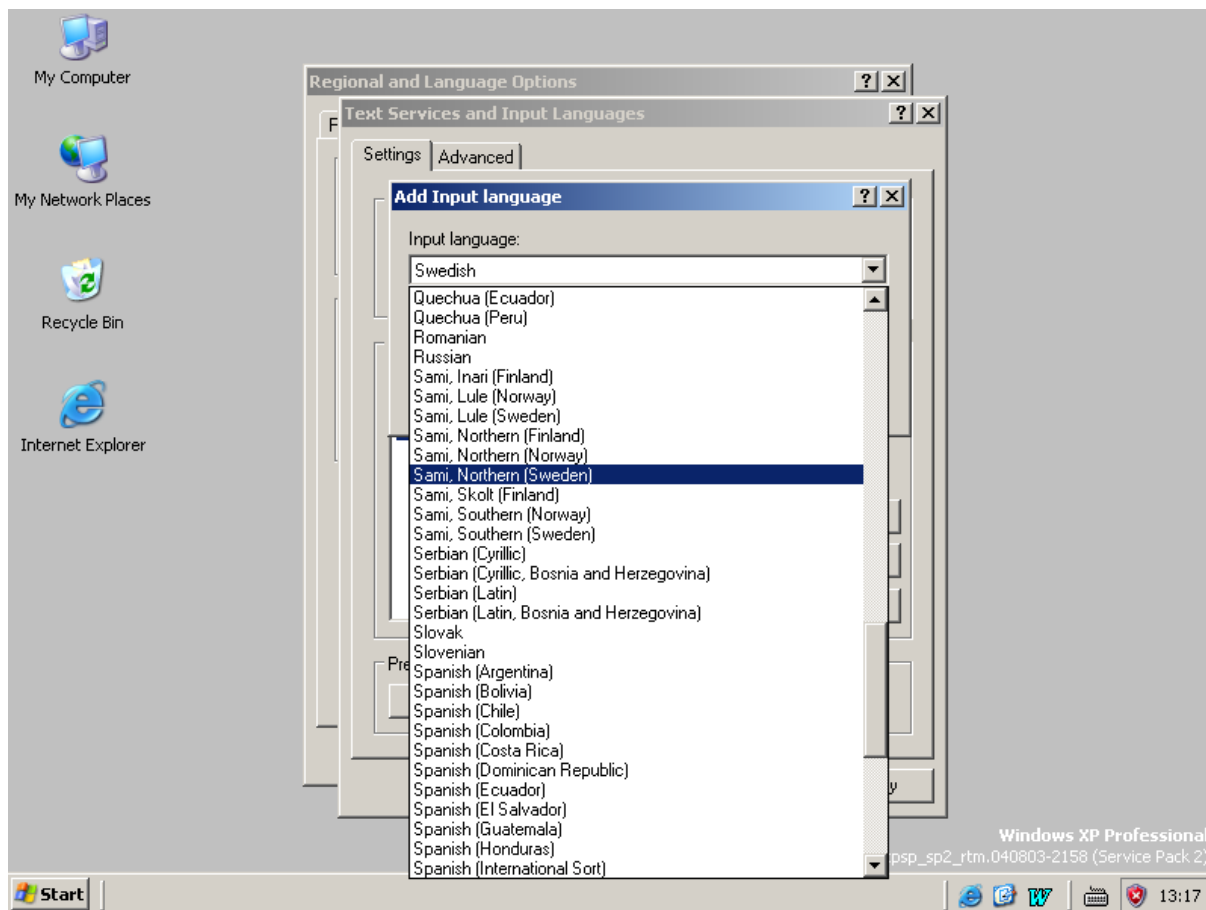
Select the **Languages** tab, then click **Details**.



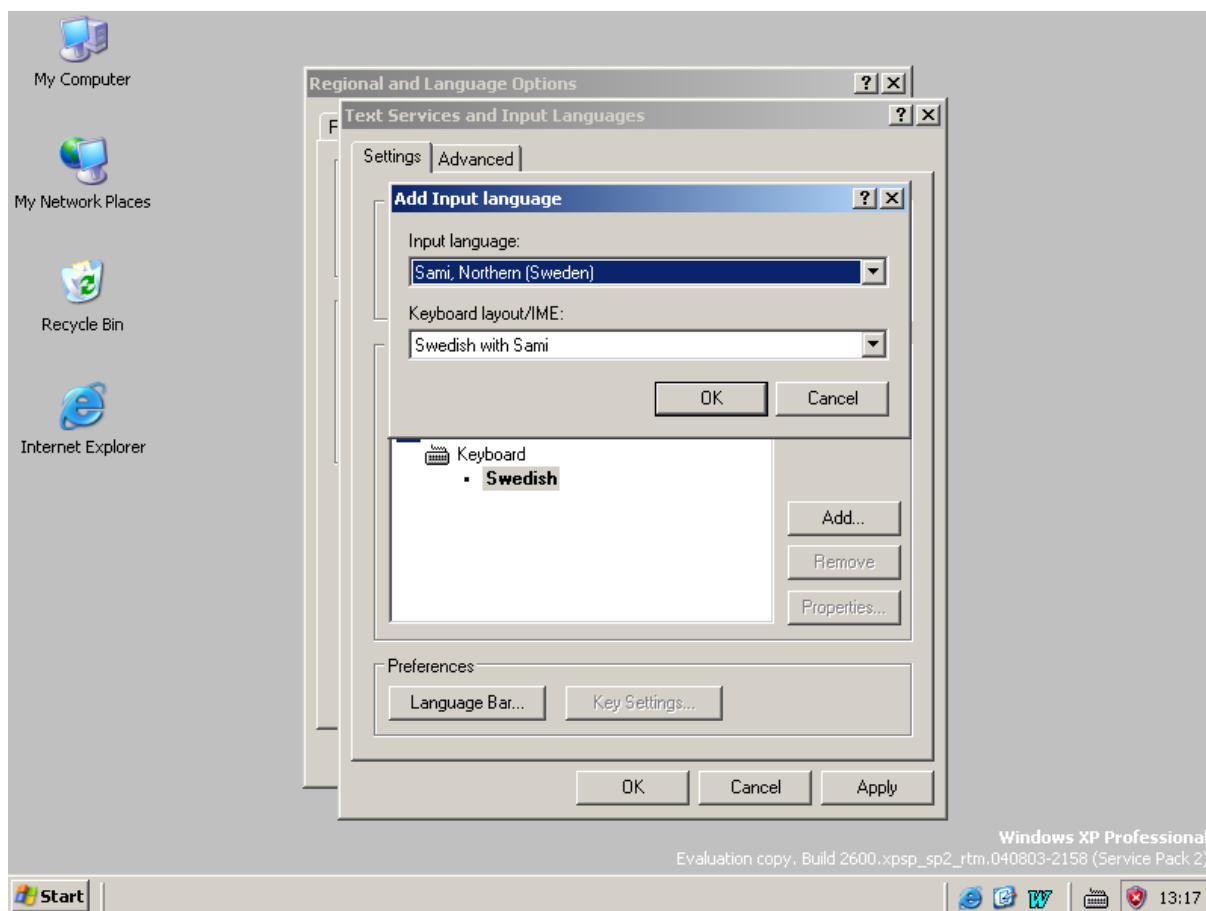
If the XP system contains the Windows 2000 modification, one of its Sami keyboard layouts may appear together with the national one. If so, click the Sami layout and then **Remove**. Then click **Add** to start activating the Sami language support.



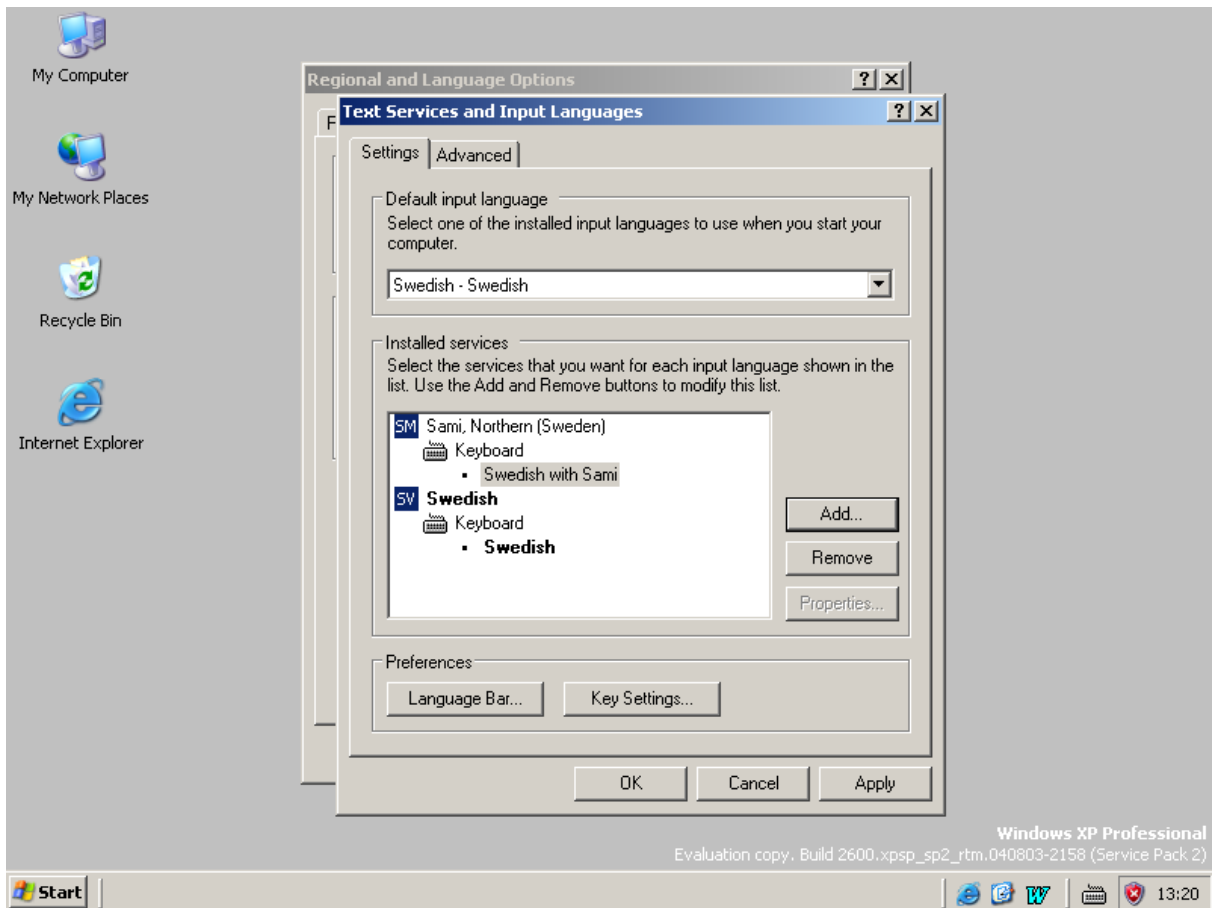
Click the down-arrow in the right of the **Input language** box.



Find the desired language/country combination and click it.

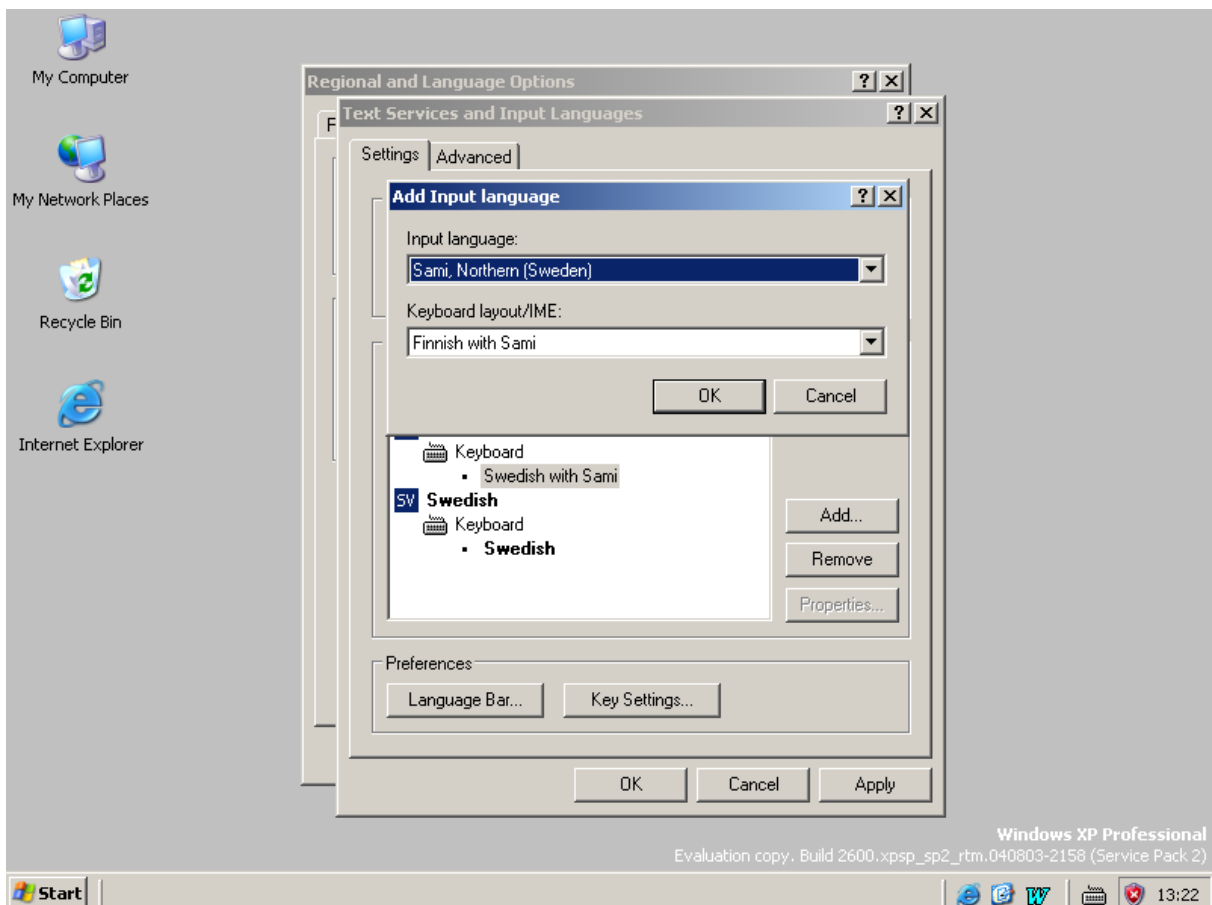


Default keyboard layout for the selected language will be the "national with Sami". Click **OK**.

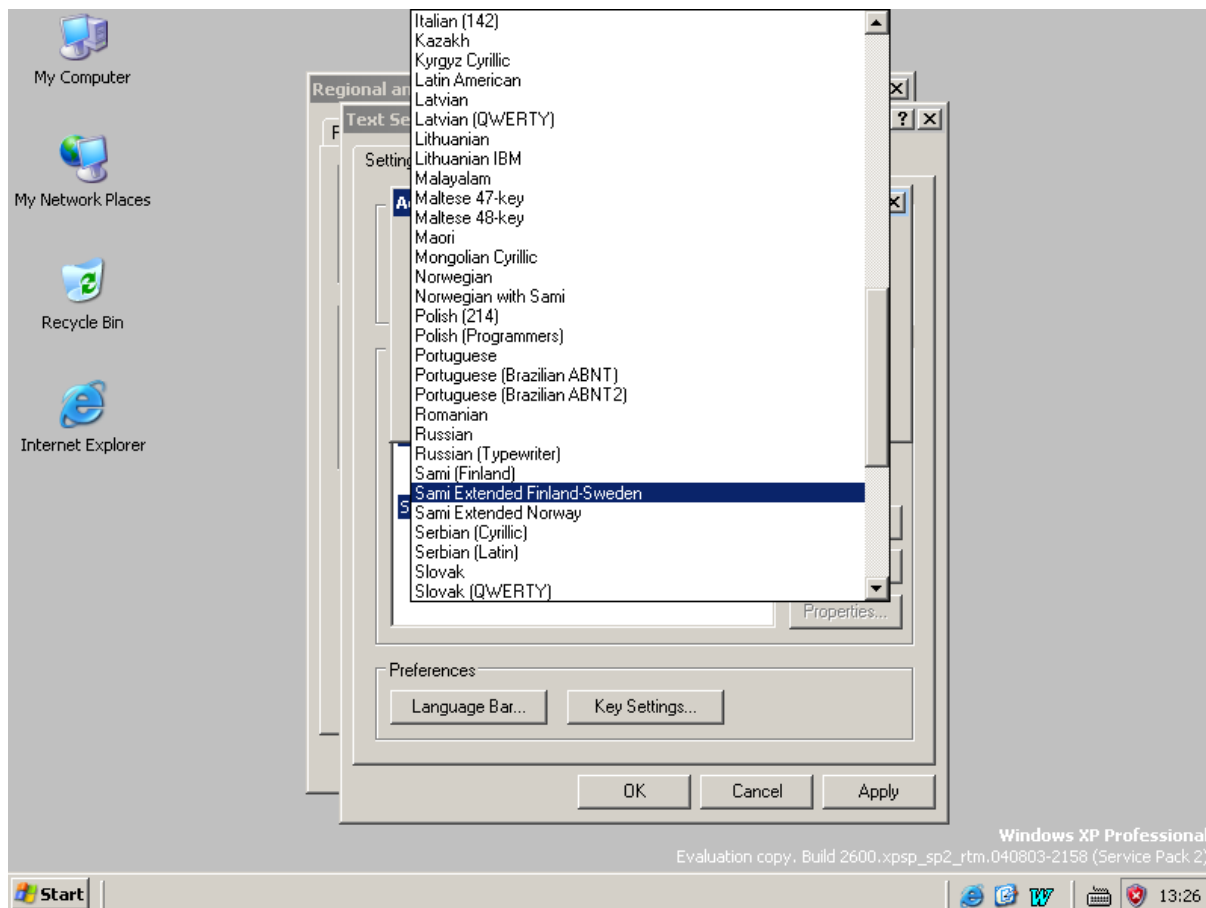


Support for the selected Sami language is now activated.

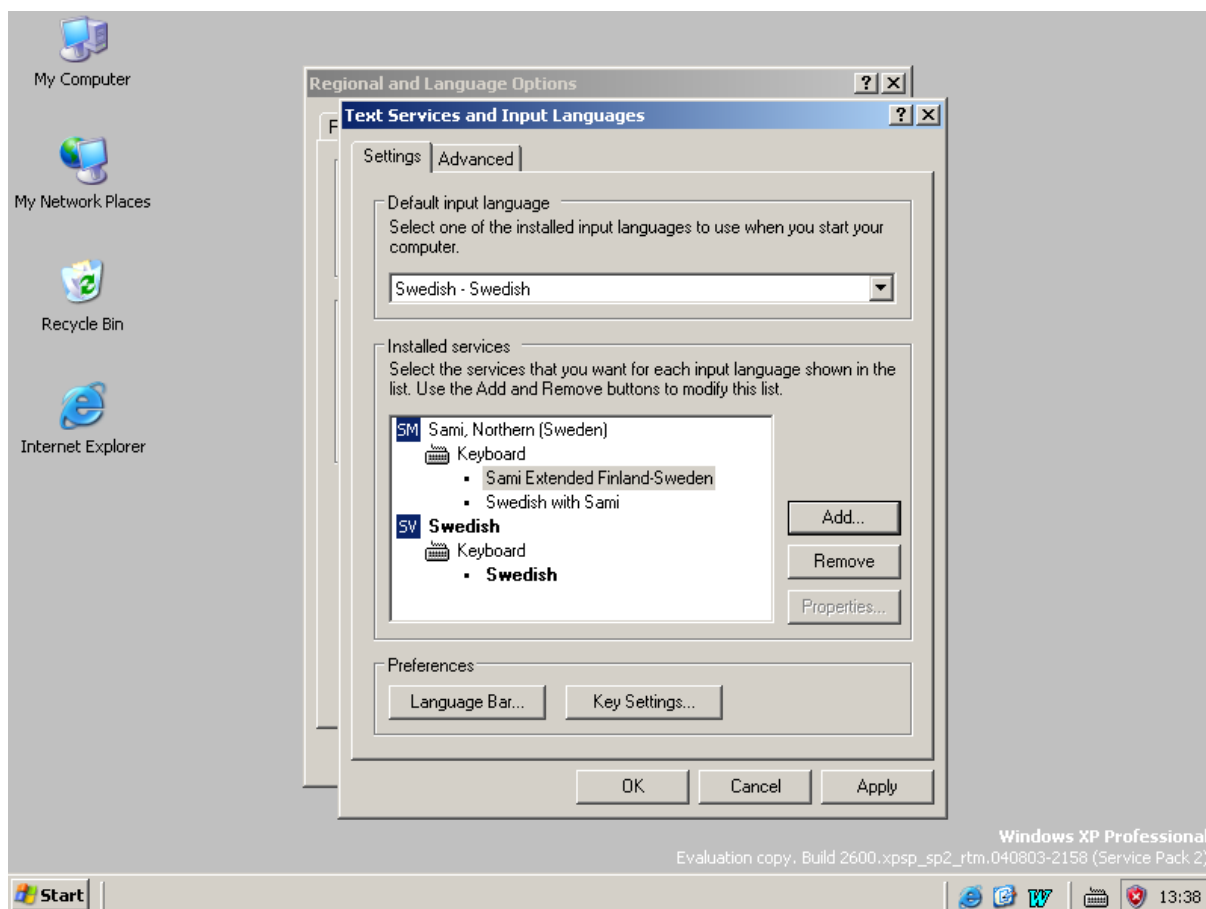
To add also a Sami keyboard layout, click **Add** (but first read text "Notes on keyboard layouts" at end of document – to not install a Sami layout at the moment, skip next three steps).



Click the down-arrow in the right of the **Keyboard layout/IME** box.

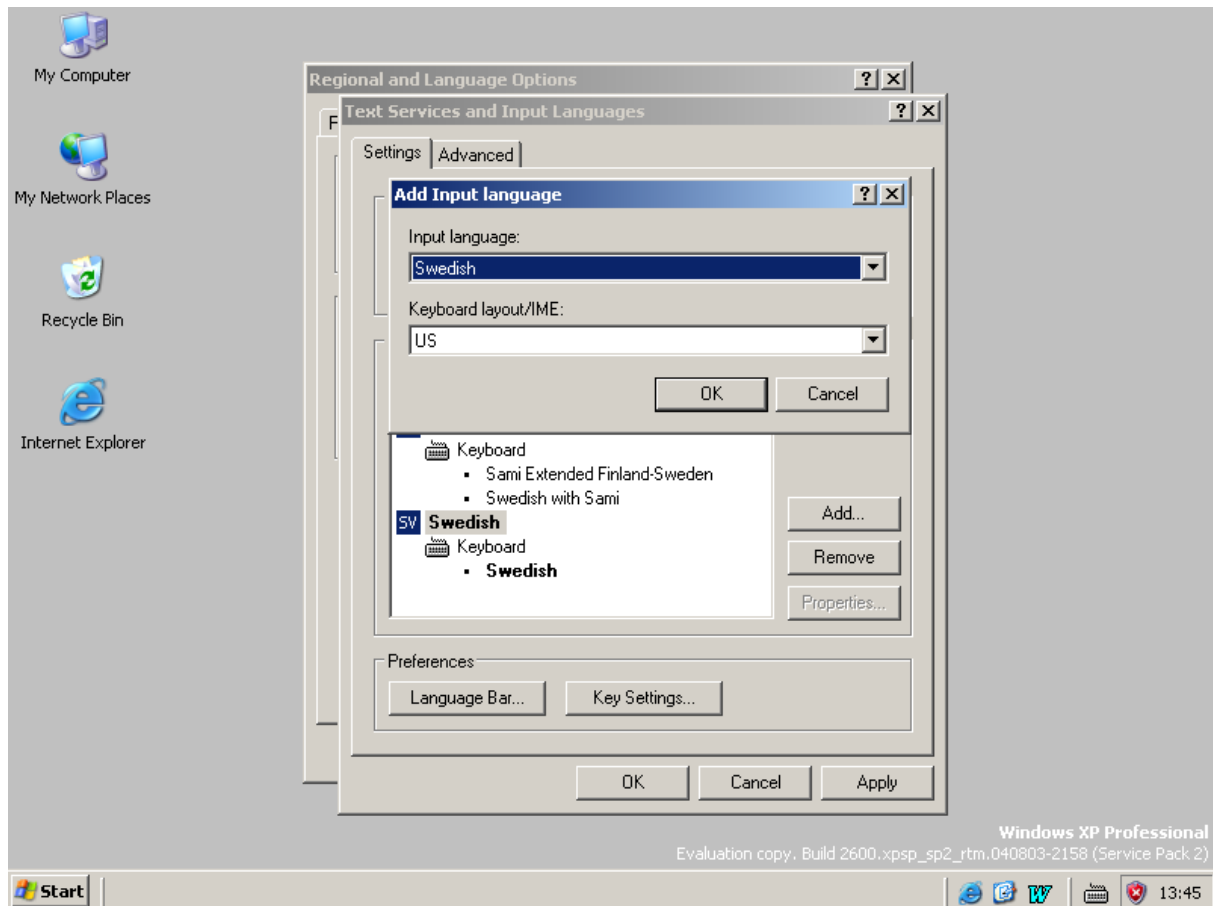


Find the desired keyboard layout and click it, then click **OK**. Note that the list may contain the Windows 2000 layout **Sami (Finland)**, which must be ignored.

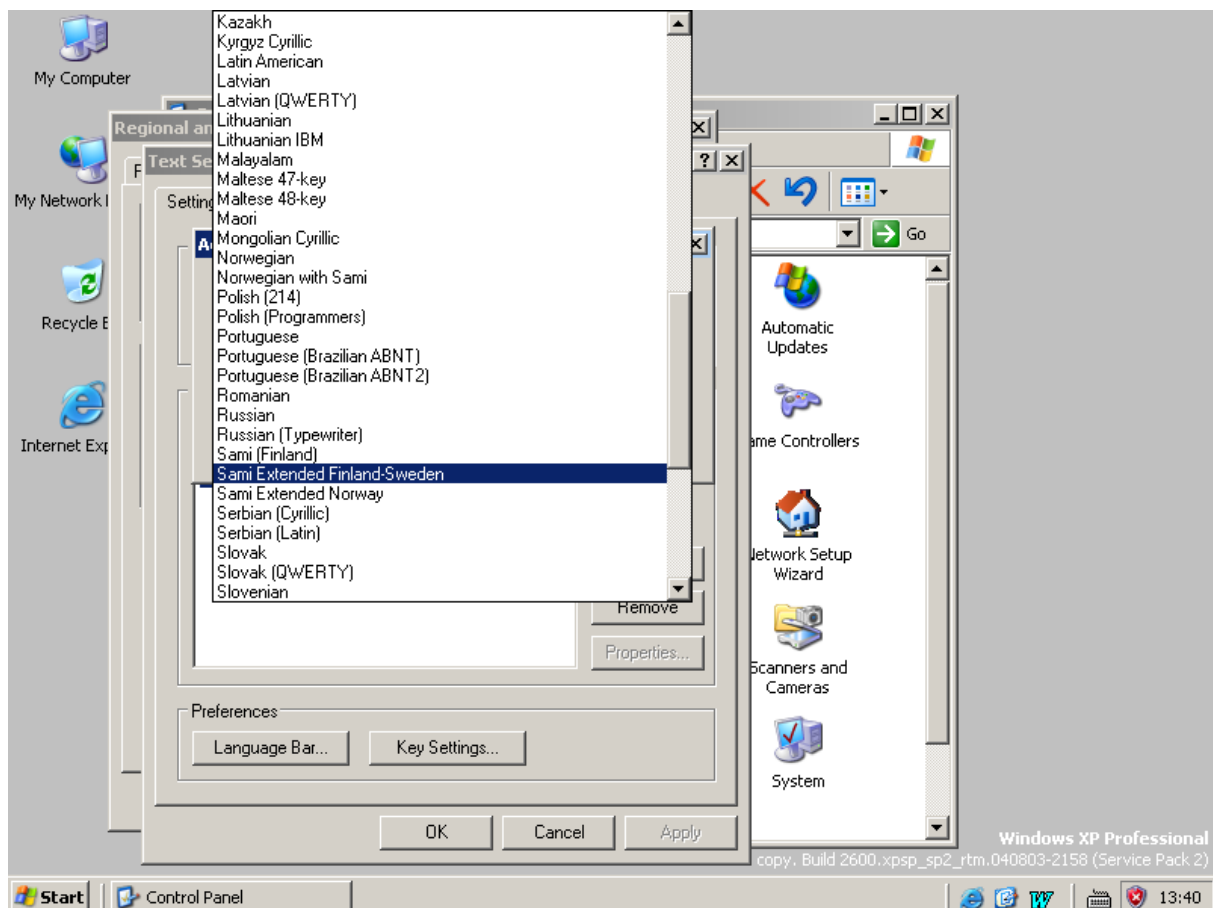


There are now two alternative keyboard layouts for Sami.

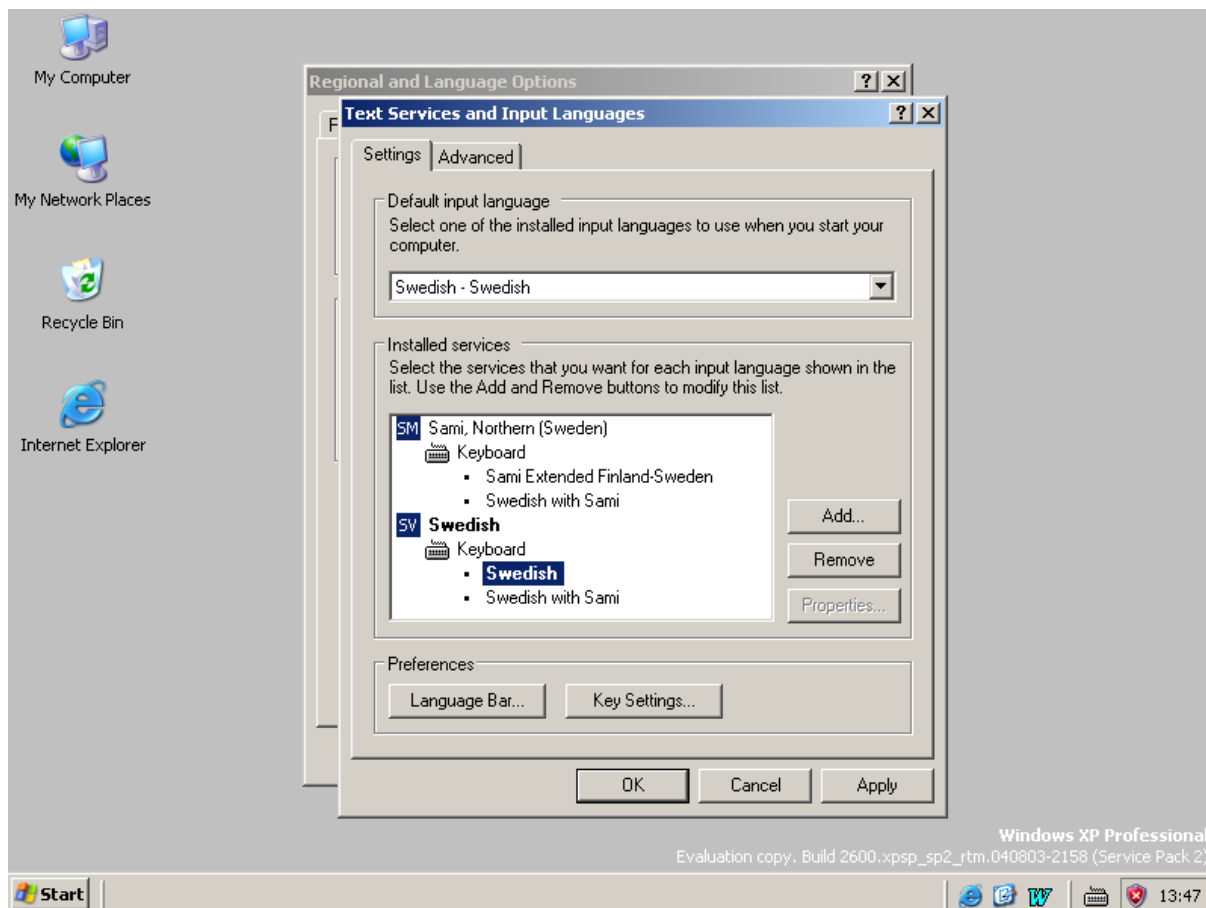
To have the Sami letters easily accessible also when writing in the national language, the "national with Sami" layout should be added. Click the national language (in this case **Swedish**), then click **Add**.



Click the down-arrow in the right of the **Keyboard layout/IME** box.

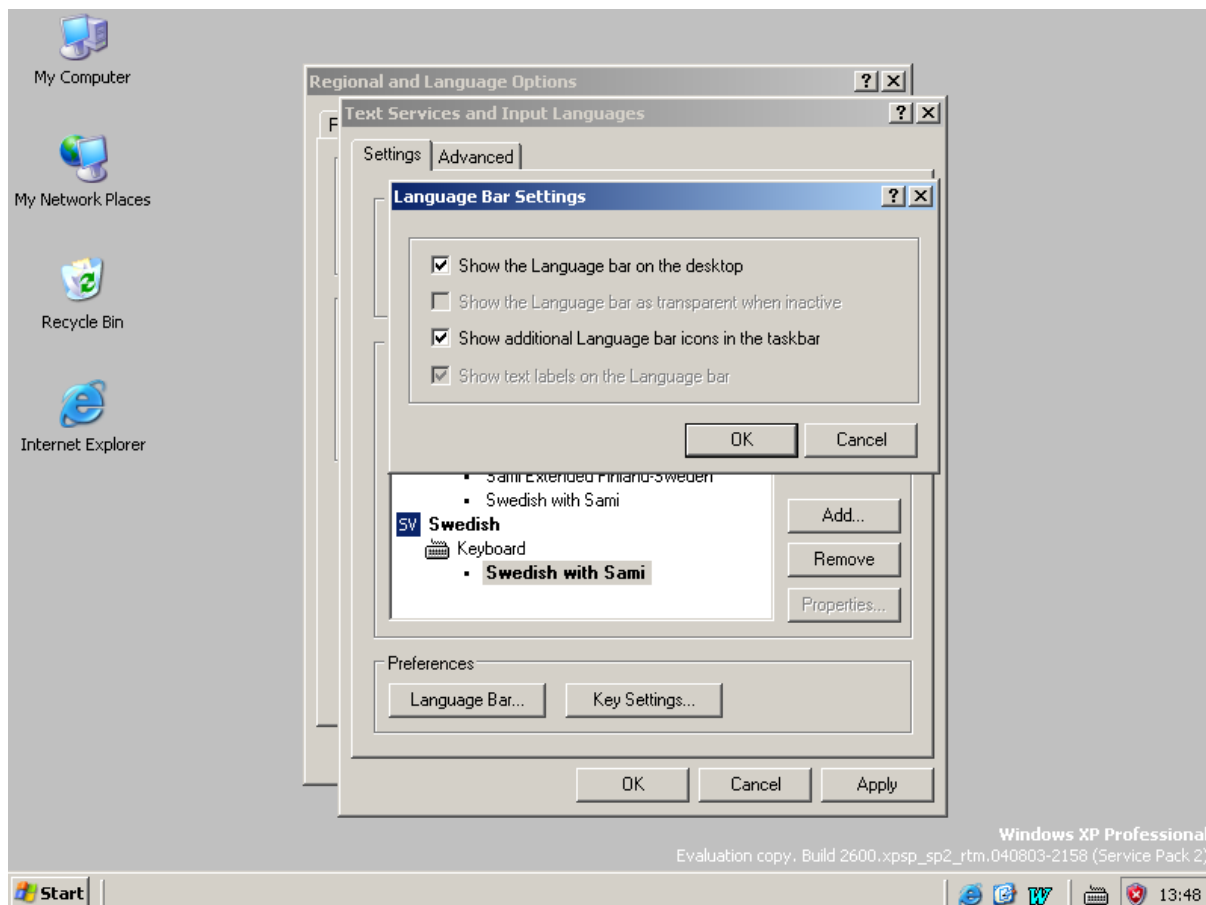


Find the desired national keyboard layout with Sami and click it, then click **OK**.

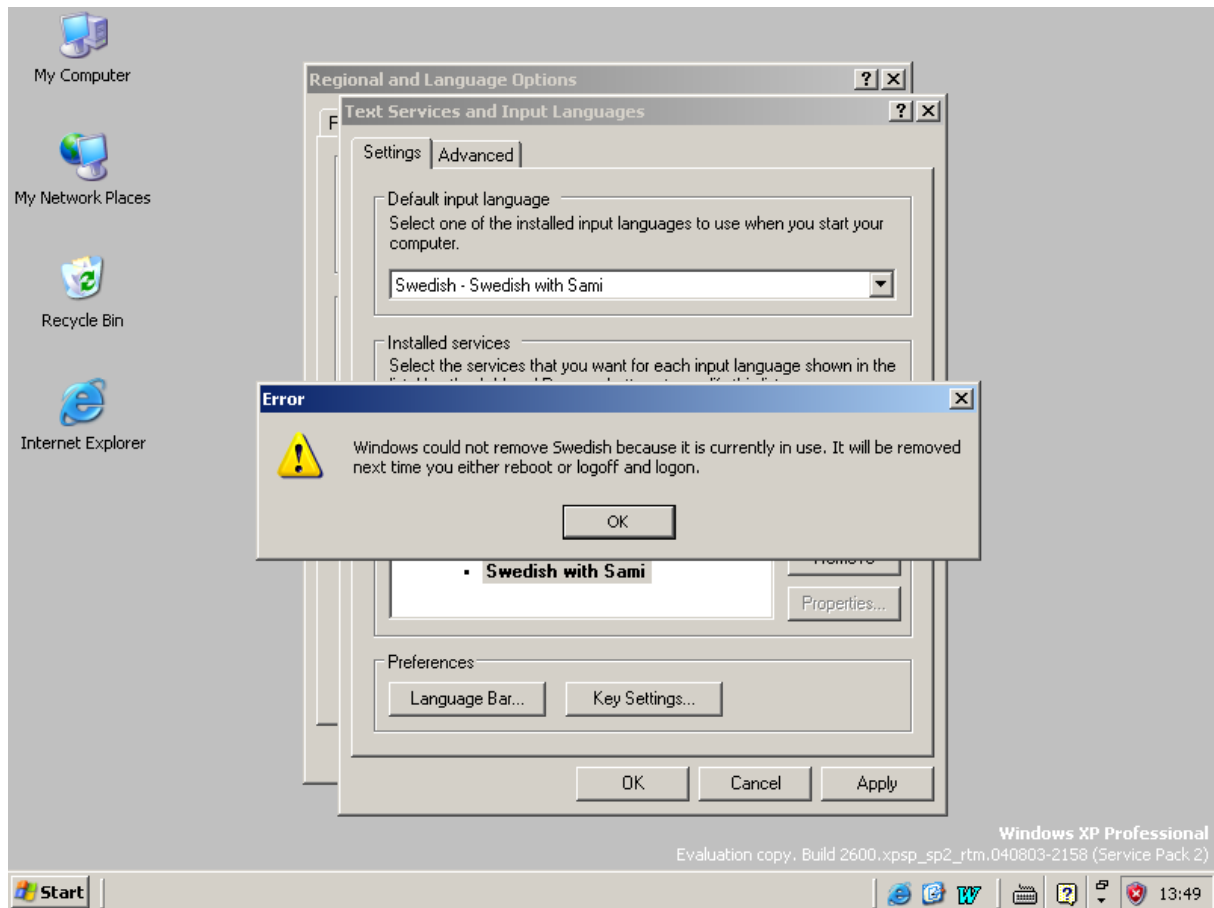


National layout with Sami has now been added, and the original national one is no longer needed. Click it, then click **Remove**.

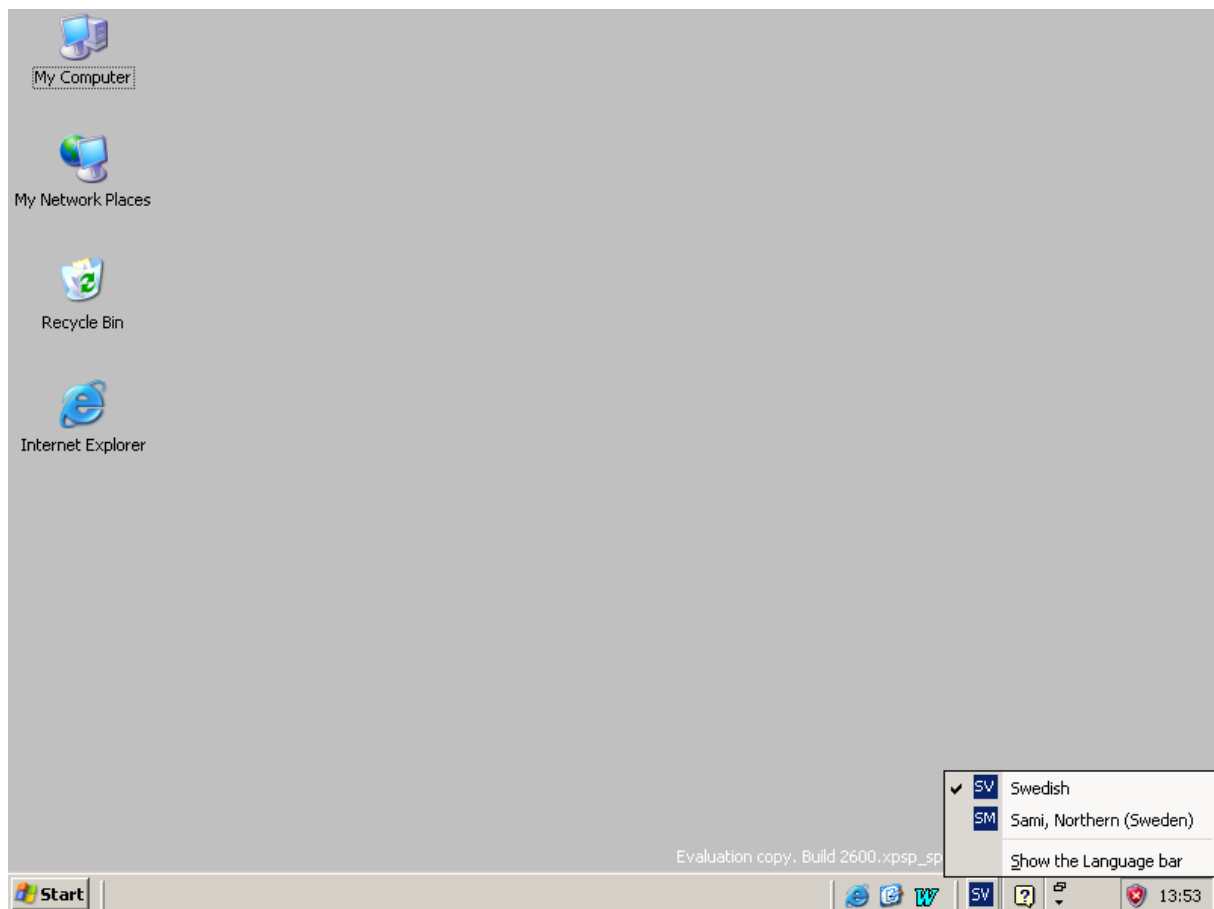
Now click **Language Bar** and check the settings. Recommended:



Click **OK** repeatedly until all windows are closed.

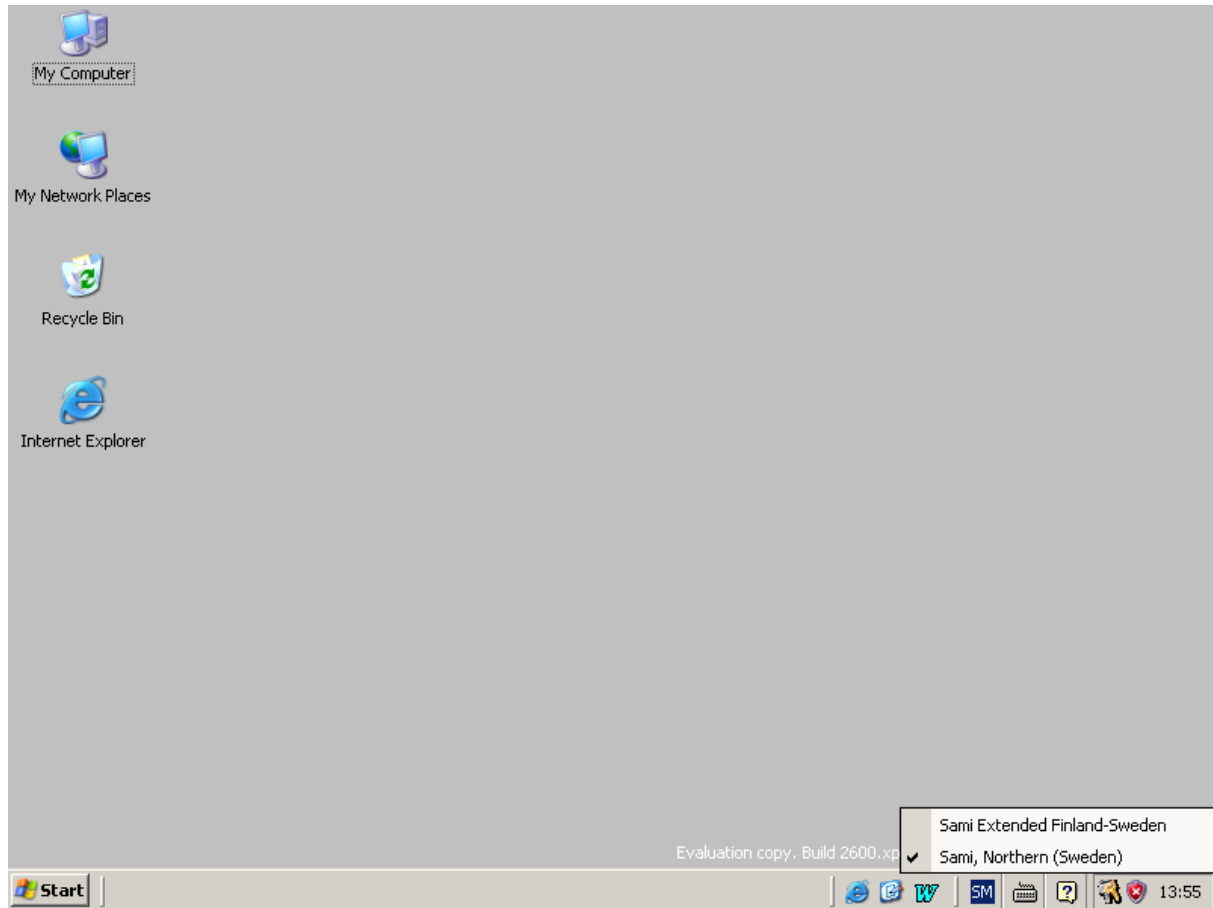


A message may be displayed that Windows must be restarted for changes to take effect. If so, restart.



A language indicator (**FI**, **NO**, **SV** or **SM**) is now displayed in the right of the taskbar. Click it to display the languages activated.

Select a language by double-clicking its indicator. If Sami is selected, and both national and Sami keyboard layouts have been installed, a keyboard icon is displayed next to the language indicator. Click the icon to display the layouts available.

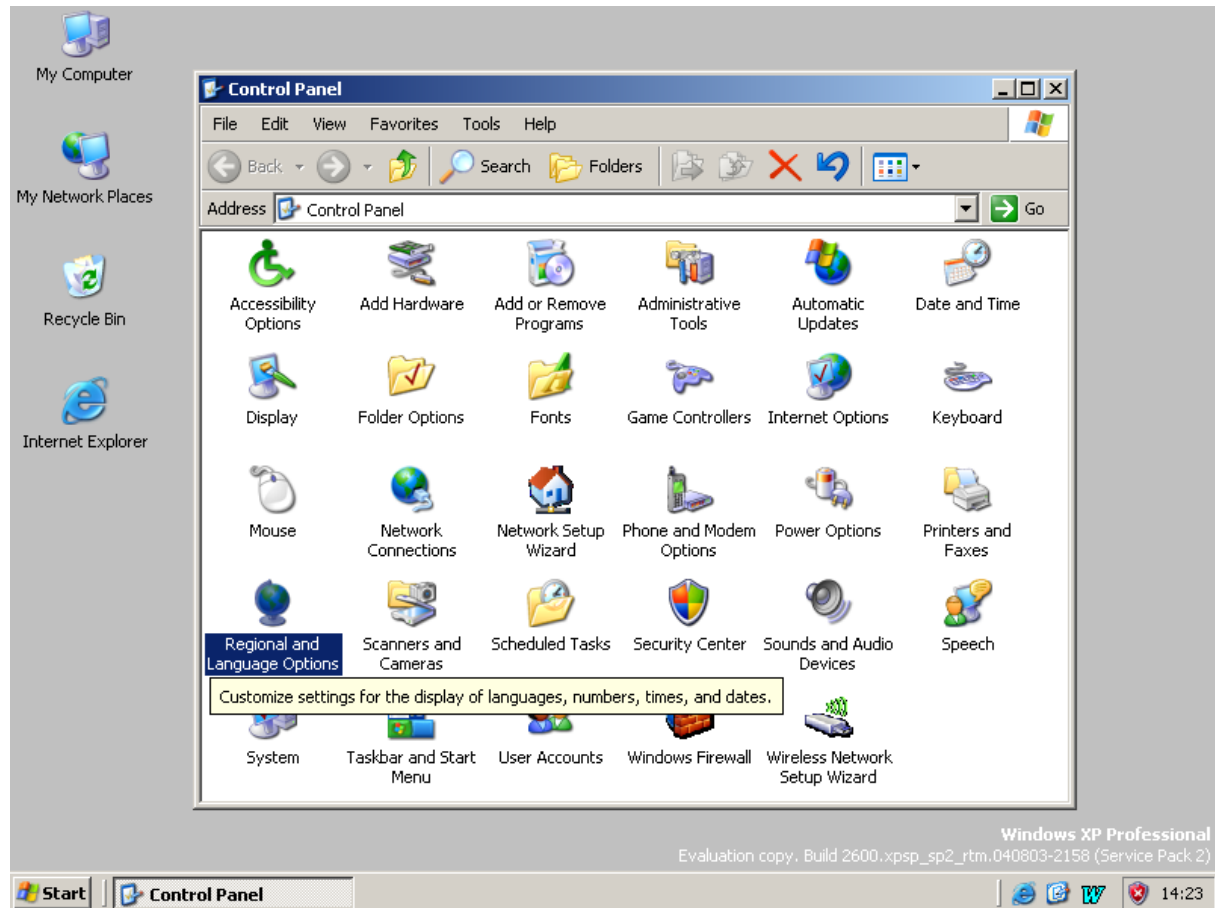


This Windows function is slightly confusing. The selected language's default keyboard layout is given as the name of the **language**, not of the **layout**. In this case the default Sami-language keyboard layout is **Swedish with Sami**, but it is identified as **Sami, Northern (Sweden)**. To switch to the Sami layout (in this case **Sami Extended Finland-Sweden**), click it;.

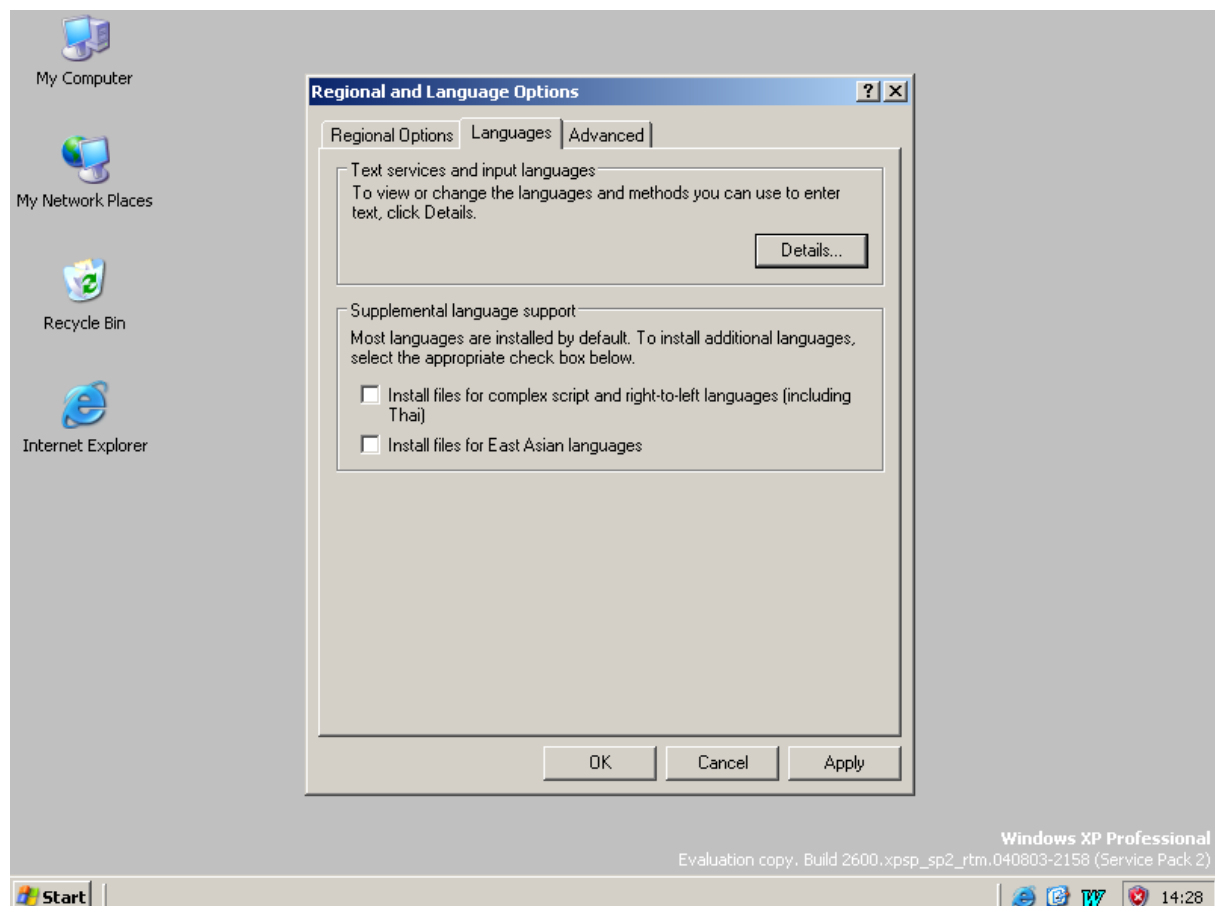
Language and keyboard layout can also be displayed at the top of the screen – click the language indicator and then mark **Show the Language bar**.

Set-up of national keyboard with Sami letters

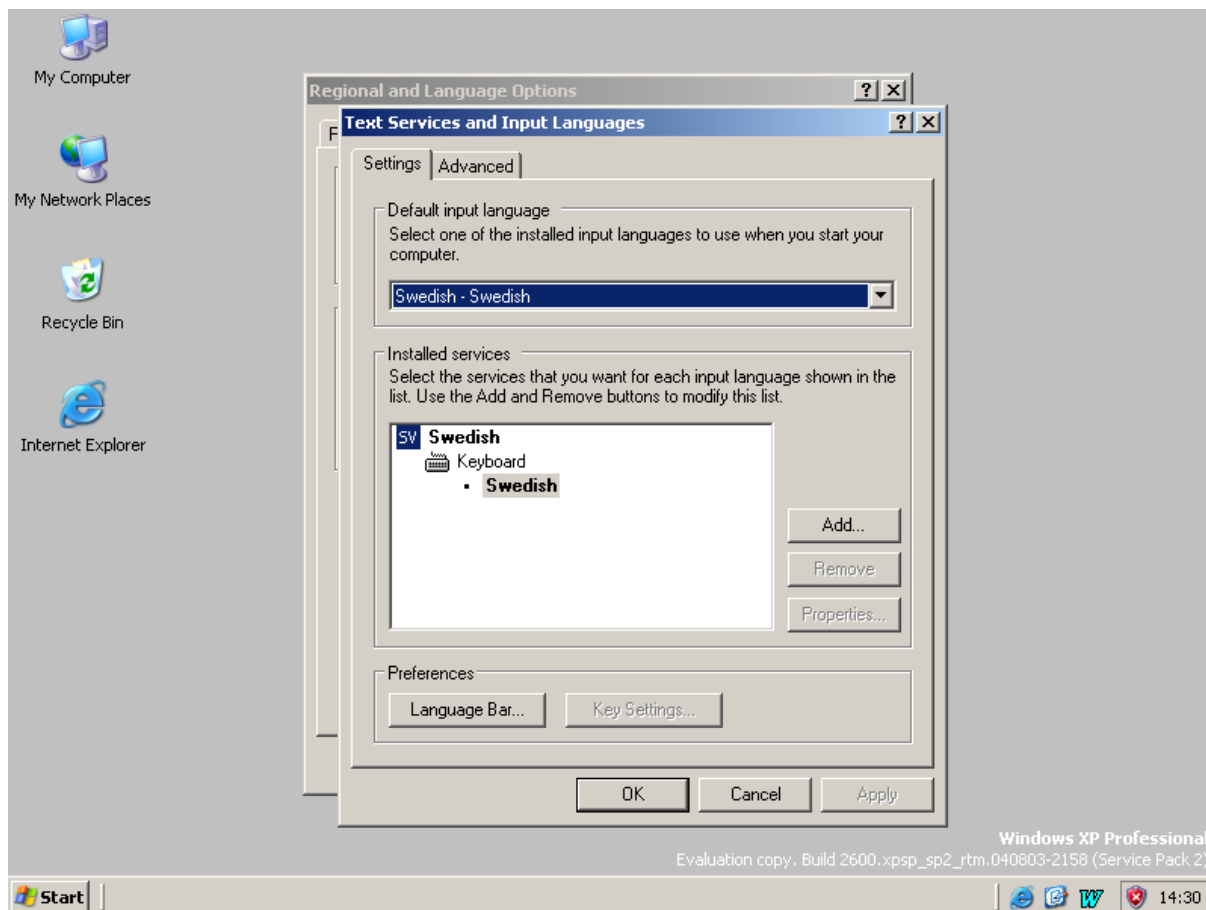
Service Pack 2 must be installed. Open **Control Panel**.



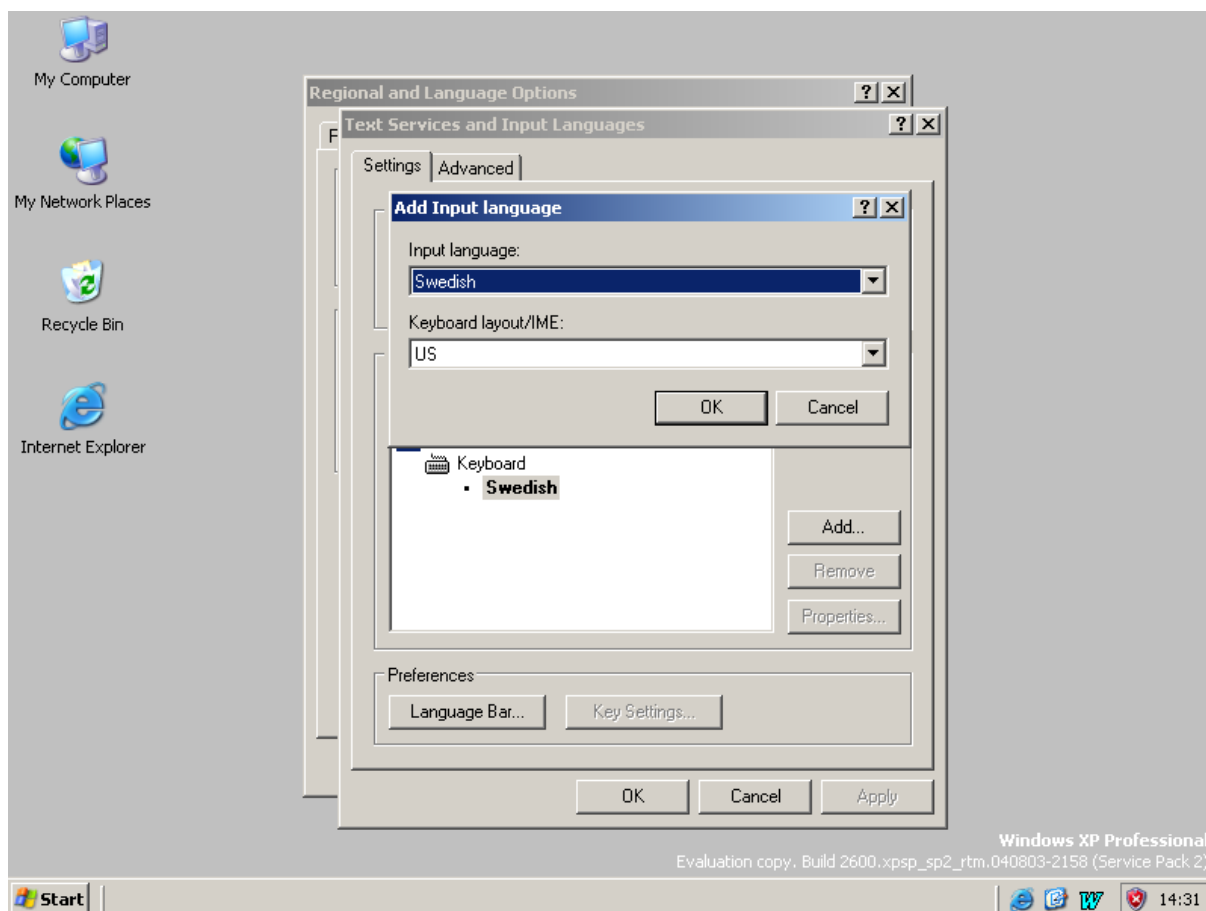
Open (double-click) **Regional and Language Options**.



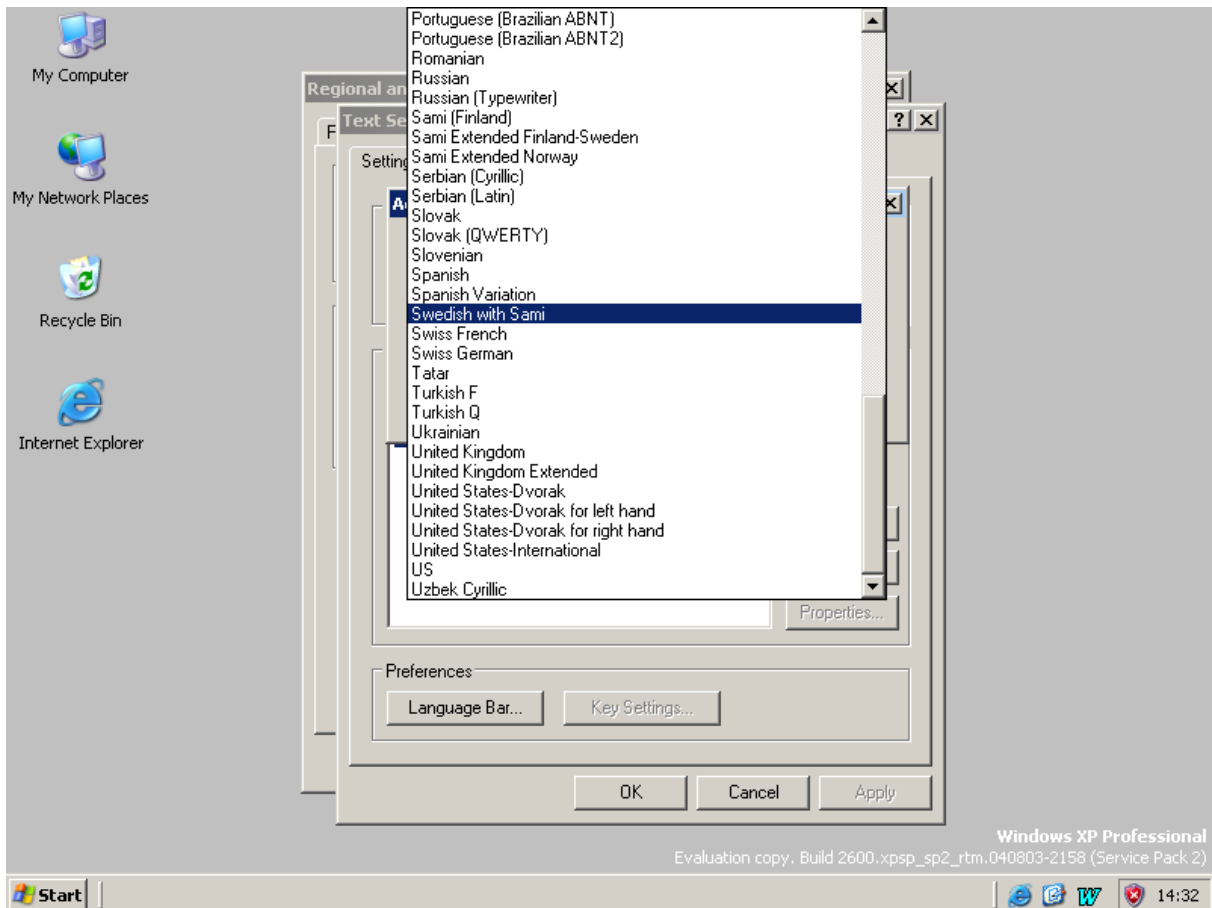
Select the **Languages** tab, then click **Details**.



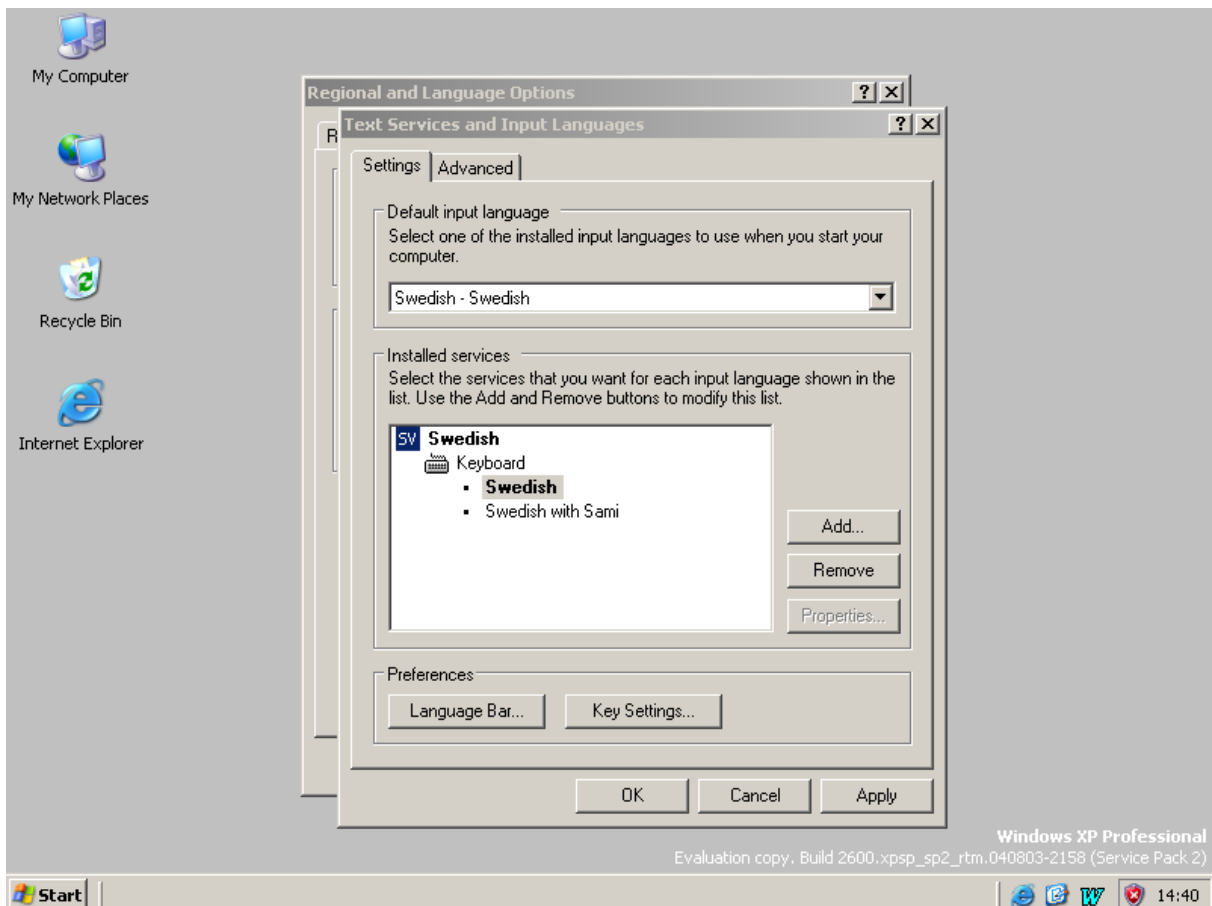
Click **Add**.



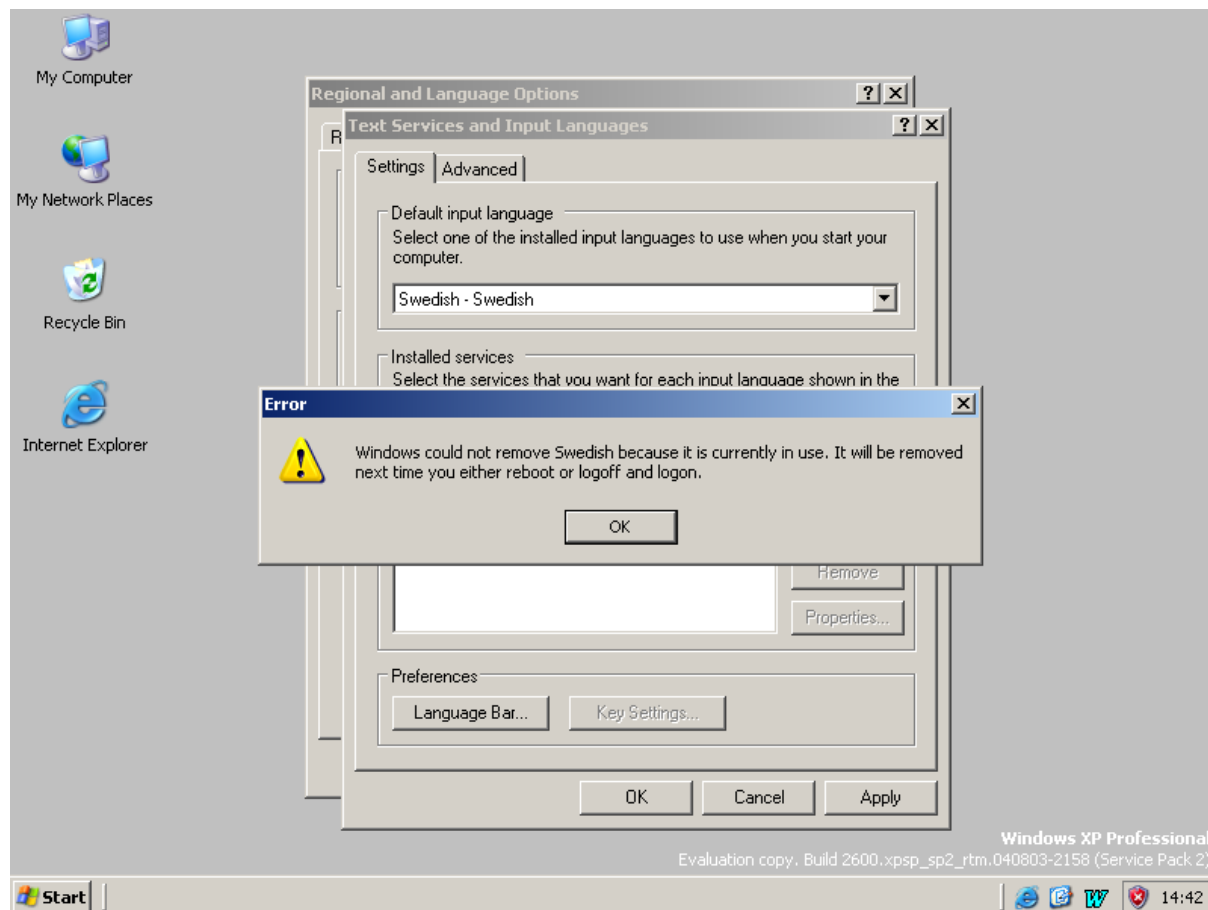
Click the down-arrow in the right of the **Keyboard layout/IME** box.



Find the desired national keyboard layout with Sami (in this case **Swedish with Sami**) and click it, then click **OK**.



National layout with Sami has now been added, and the original national one is no longer needed. Click it, then click **Remove** and **OK**.



A message will be displayed that Windows must be restarted for changes to take effect. Click **OK** repeatedly until all windows are closed, then restart.

The North, Lule and South Sami letters are now available in **AltGr** state on their corresponding "base letter" keys, i.e.:

á as **AltGr-a**
 č as **AltGr-c**
 đ as **AltGr-d**
 ĩ as **AltGr-i**
 ŋ as **AltGr-n**
 š as **AltGr-s**
 Ƨ as **AltGr-t**
 ž as **AltGr-z**

Inari and Skolt Sami letters are also available in **AltGr** state, but some of them not on a corresponding "base letter"; see Annex A.

Notes on keyboard layouts

As mentioned above, both the "national with Sami" and the "Sami-language" keyboard layouts have been implemented by Microsoft.

The original Sami-language layouts were developed in the work of "Datautvalget" (Sami Committee for Computer Standardization) in 1996–1997. They were implemented in "Levi", and later with some modifications also in the TietoEnator Windows 2000 office system for the Norwegian Sami Parliament. They are based on the principle that all of the letters of the Northern Sami alphabet shall be directly available on the keyboard. Letters not in the North Sami alphabet – e.g. x – have been "moved down" to AltGr state. In the Sami Parliamentary Council work on the Sami IT requirements in 2002–2004, a few additional changes were decided on, and the final layouts specified in the documents Sámediggi 01/850-51 and 01/850-86.

The keyboard layout "Swedish with Sami" was originally developed for the Swedish "Statskontoret" (the Swedish Agency for Administrative Development) technical standard TN36 *Support for Sami languages in Swedish data processing*, published in 2001. It was intended as a complement to the "Levi" layout – which is also specified in the Statskontoret document – to make it possible to conveniently input Sami letters from a conventional Swedish keyboard. The principle of the layout is to position the specifically Sami letters in AltGr state on "intuitively natural" keys, i.e. with á as AltGr–a, č as AltGr–c etc.

In the work on the Sami Parliamentary Council documents, the Statskontoret layouts were extended with Inari and Skolt Sami letters, and were specified in Sámediggi 01/850-51 in Swedish and Norwegian versions (the Finnish version is identical to the Swedish one, but listed separately in Windows). Primarily intended for data entry situations in Finnish, Norwegian or Swedish with occasional input of Sami letters, the layouts may be preferable to the Sami-language one for writing Southern and Lule Sami, and for some individuals possibly also for Northern Sami. An advantage of the layouts is that the "national with Sami" do not need any special markings on keys (except for some Inari and Skolt Sami letters that could not be placed "intuitively").

As regards language and keyboard layout settings, it must be noticed that they may be changed automatically in some situations by Windows and/or application software like e.g. Word. Having both the default "national with Sami" and the "Sami-language" layout available adds to complexity in use. For non-advanced users, it may therefore be advisable to initially not install the Sami-language – i.e. "Levi" – layout, but first get experience of language switching with only the national (with Sami) layout.

Alternatively, the Sami-language layout could be installed as described above and the default "national with Sami" then deleted, so that keyboard layout will always be Sami when that language is selected.

Technical information

The following text is of interest only to advanced users.

The Windows 2000 modification is packaged in a self-executing file, containing the keyboard drivers as well as update of the Windows Registry. The modification will work also in XP, but the keyboard layout will then differ partly from what is specified in Sámediggi 01/850-51 and 01/850-86.

At execution of the Windows 2000 modification, information on its three keyboard drivers is written to the Registry's `HKEY_LOCAL_MACHINE\SYSTEM\ControlSet001\Control\Keyboard Layouts`. The keys are identified as 0000043b *Sami (Norway)*, 0001043b *Sami (Sweden)* and 0002043b *Sami (Finland)*.

When SP2 is installed in XP, the keys 0000043b, 0000083b, 0001043b, 0001083b and 0002083b are written to the Registry. The names of the keys varies with XP version: for the English version *Norwegian with Sami*, *Swedish with Sami*, *Sami Extended Norway*, *Finnish with Sami* and *Sami Extended Finland-Sweden*, respectively.

Consequently, if the Windows 2000 modification has been previously installed in the XP system, the *Sami (Norway)* and *Sami (Sweden)* layout keys will be replaced, while the *Sami (Finland)* key will remain. If desired, it can be deleted, removing "Sami (Finland)" from the list of available keyboard layouts. The drivers themselves will remain, but are quite small.

Warning: If a Windows 2000 modification is executed **after** SP2 installation (for which there is naturally no reason) the system's Sami support will be largely destroyed!

Annex A

Illustrations of Microsoft-implemented keyboard layouts in Windows XP SP2

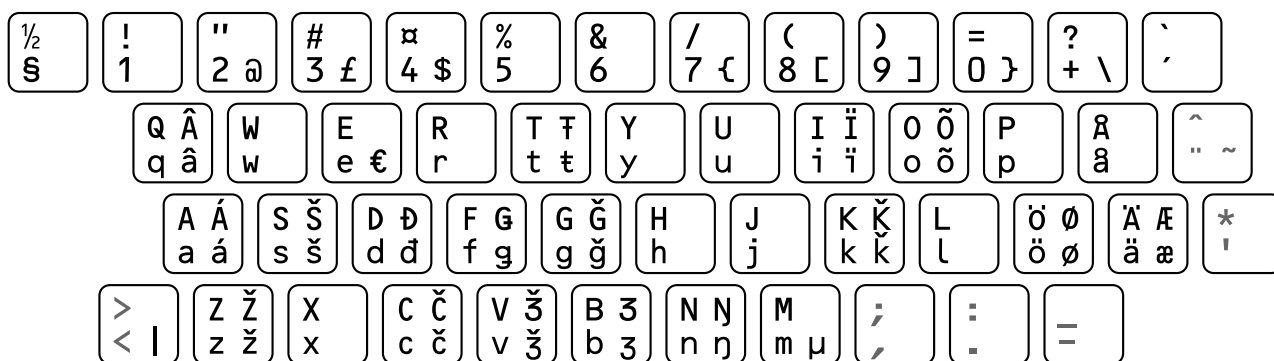


Figure A.1 – "Finnish with Sami" and "Swedish with Sami" keyboard layouts

"Norwegian with Sami" layout identical as regards letters, except ö/ø exchanged for ø/ö and ä/æ for æ/ä

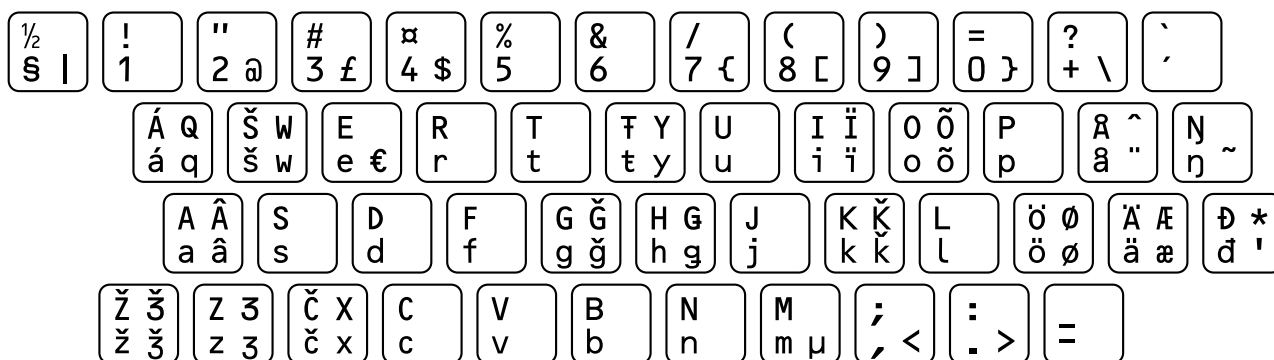


Figure A.2 – Sami-language keyboard layout for Finland/Sweden

Layout for Norway identical as regards letters, except ö/ø exchanged for ø/ö and ä/æ for æ/ä