Customer Experience Improvement Program (CEIP)

The Customer Experience Improvement Program (CEIP) collects information about how nesting software is being used, without interrupting the user. This helps Hypertherm identify which ProNest features to improve. No information collected is used to identify or contact users.

CONTENTS

ABOUT CEIP

How to opt in or out of the program

Once ProNest v10.2 is installed, when ProNest is opened, the user is prompted with a dialog asking whether or not they want to participate. Until they explicitly select "Yes" or "No", they will continue to be prompted each time they run ProNest.

Users can opt in or out at any time by opening ProNest, going to **File** menu > **Preferences**, then clicking **Privacy** in the left pane and selecting **Yes** or **No**.

This preference is stored in the **CEIP.ini** file, found here:

C:\Users\<user>\AppData\Local\Hypertherm CAM\ProNest 2012

In this INI file, Participate=0 means CEIP is turned off, while Participate=1 means it is active. Also, Prompted=0 means the opt-in prompt will appear at startup, while Prompted=1 means that this dialog will be hidden.

How does it work?

Participants simply keep using ProNest as they normally would. When ProNest is closed or an existing job is opened or saved, information about the session is collected in a temporary file and transmitted to Hypertherm via Internet.

The temp folder is:

C:\Users\<user>\AppData\Local\Hypertherm CAM\ProNest 2012\CEIP

The executable (CEIPSender.exe) that sends data is located in the Program Files directory:

C:\Program Files\Hypertherm CAM\ProNest 2012

This happens in the background and should only take a few seconds.* Internet connectivity is required to participate. If the user connects through a proxy server, they will probably not be able to take part.

What type of information is collected?

Information collected from program participants only includes nonspecific information about how the software is being used. Information collected covers the following:

- General information about your operating system
- Regional information including ProNest display language and your system locale
- Job duration and status
- Automatic nesting (settings, duration, total parts nested, etc.)
- Shapes and dimensions of parts in the part list
- Plate type and dimensions
- Menu items and mouse clicks in the main nesting window, Edit Part List and Edit Plate List windows
- Manual nesting usage such as bumping, nudging, and rotating parts
- Materials used
- Plate utilization statistics

Troubleshooting

*If the user is experiencing delays while closing ProNest, opening a job, or saving a job, it may be related to CEIP data collection. Delays may be due to the large quantity or complexity of parts in the job.

Log file

A log file called **CeipLog.csv** is created in the following directory:

C:\ProgramData\Hypertherm CAM BETA\ProNest 2012

This can be used to analyze how long it took to create CEIP information. Specifically, the following is recorded:

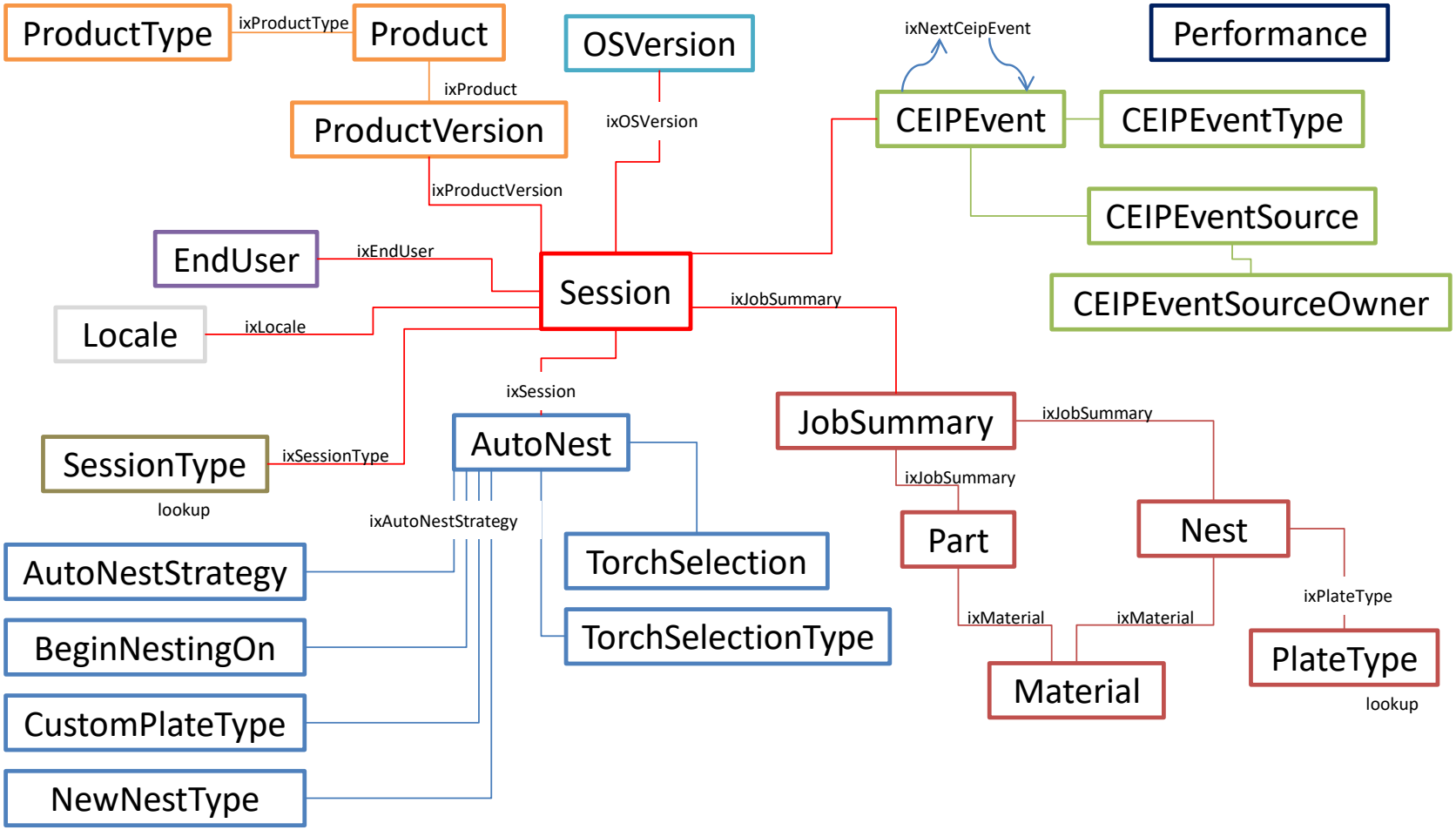
- Collect Part data
- Collect Nest data
- Write session data to file
- Total time to close the session

If CEIP is causing significant delays, logs should be collected so that they can be analyzed. The user can always turn off CEIP in Preferences if wait times become too long.

CEIP DATABASE SCHEMA

Database diagram

Relationship of tables in the CEIP database is detailed below.



Database tables

Notes: Prefix naming convention for the column names are as follows:

- ix = index (primary key or foreign key referenced by another table)
- c = count
- s = string
- f = flag
- d = double (decimal value)
- dt = datetime

dbo.Session CEIP session table		
Column	**Data type**	**Remarks**
ixSession	int IDENTITY(1, 1) PRIMARY KEY CLUSTERED	
ixEndUser	int	
ixOSVersion	int	
ixProductVersion	int	
ixLocale	int	
ixSessionType	int	0 = New (A new job is opened when ProNest is already running.) 1 = New (startup) (A new job is started when ProNest is started up.) 2 = Open (a previously-saved job is opened)
fSaved	tinyint	
guidSession	UniqueIdentifier	
dtStart	datetime	
dtEnd	datetime	
dtDataReceived	datetime	

dbo.SessionType CEIP session type		
Column	**Data type**	**Remarks**
ixSessionType	tinyint PRIMARY KEY CLUSTERED	0 = New (A new job is opened when ProNest is already running.) 1 = New (startup) (A new job is started when ProNest is started up.) 2 = Open (a previously-saved job is opened)

sName	nvarchar(20)	

dbo.EndUser

Records information about who is using ProNest and whether they are a Hypertherm associate. A check for if they're connecting via the Hypertherm domain determines this.

Column	Data type	Remarks
ixEndUser	int PRIMARY KEY CLUSTERED,	
guidEndUser	UniqueIdentifier	
fAssociate	tinyint	0 = non-Hypertherm user 1 = Hypertherm user
sName	nvarchar(128)	

dbo.OSVersion

Operating system details

Column	Data type	Remarks
ixOSVersion	int IDENTITY(1, 1) PRIMARY KEY CLUSTERED	
iMajor int,	int	
iMinor int,	int	
iBuild int,	int	
sServicePack	nvarchar(128)	
fProductType	int	
f64Bit	tinyint	0 = no 1 = yes (64 bit)

dbo.Locale

Information about ProNest display language and system locale

Column	Data type	Remarks
ixLocale	int IDENTITY(1, 1) PRIMARY KEY CLUSTERED,	
sName	nvarchar(20)	ProNest display language (set in Preferences) For instance "es-MX" or "ru-RU"
iLCID	int	See code-to-locale reference table

dbo.ProductVersion

Nesting software version.

Column	Data type	Remarks
ixProductVersion	int IDENTITY(1, 1) PRIMARY KEY CLUSTERED	
ixProduct	int	
iMajor	int	
iMinor	int	
iRelease	int	
iBuild	int	

dbo.Product

Nesting software

Column	Data type	Remarks
ixProduct	int IDENTITY(1, 1) PRIMARY KEY CLUSTERED	
guidProduct	UniqueIdentifier	
sName	nvarchar(128)	
ixProductType	tinyint	0 = "" (release version) 1 = "NR" 2 = "BETA" 3 = "BETA NR" 4 = "ALPHA"

dbo.ProductType

Nesting software type

Column	Data type	Remarks
ixProductType	tinyint IDENTITY(1, 1) PRIMARY KEY CLUSTERED	0 = "" (release version) 1 = "NR" 2 = "BETA" 3 = "BETA NR" 4 = "ALPHA" Note: NR, BETA NR, and ALPHA are versions of our nesting software that are only used internally by development and testing. The release version and BETA is exposed to our user base.

sName	nvarchar(20)	

dbo.JobSummary		
Column	**Data type**	**Remarks**
ixJobSummary	int IDENTITY(1, 1) PRIMARY KEY CLUSTERED	
ixSession	int	

dbo.Part Parts in a job		
Column	**Data type**	**Remarks**
ixPart	int IDENTITY(1, 1) PRIMARY KEY CLUSTERED	Part record index
ixJobSummary	int	Record Index of job containing this part
dLength	float	Part length
dWidth	float	Part width
dArea	float	Part true area (Area of exterior profile – area of cutouts)
cRequired	int	Number of parts required for the job
cNested	int	Number of parts nested for the job
ixMaterial	int	Record index of material used
fExtShape	int	Shape of the exterior profile
dExtArea	float	Area of the exterior profile
dExtBoundaryDist	float	The maximum distance of any point inside the profile to the nearest point on the exterior profile. Uses a distance transform with distance measured at 45 degree increments
dExtContainedDist	float	The maximum unbroken distance between any two points on the exterior profile. The line between the two points doesn't intersect the profile anywhere else
dLgIntArea	float	Area of the largest interior profile
dLgIntBoundaryDist	float	The maximum distance of any point inside the profile to the nearest point on the interior profile. Uses a distance transform with distance

		measured at 45 degree increments
dLgIntContainedDist	float	The maximum unbroken distance between any two points on the interior profile. The line between the two points doesn't intersect the profile anywhere else
dLgExtConArea	float	Area of the largest concavity
dLgExtConBoundaryDist	float	The maximum distance of any point inside the concavity to the nearest point on the concavity. Uses a distance transform with distance measured at 45 degree increments
dLgExtConContainedDist	float	The maximum unbroken distance between any two points on the concavity contour. The line between the two points doesn't intersect the profile anywhere else

dbo.Nest

Nests in a job

Column	Data type	Remarks
ixNest	int IDENTITY(1, 1) PRIMARY KEY CLUSTERED,	Nest record index
ixJobSummary	int	Record Index of job containing this nest
cTimesCut	int	The number of times the nest will be cut
fOutput	tinyint	Has the nest been output?
cParts	int	Total number of parts nested
cSafeZones	int	Number of safe zones used on the nest
ixPlateType	tinyint	Type of plate used
dNestingTime	float	Total time spent auto-nesting
fStrategies	int	The nesting strategies used. This is a bitmask comprised of the following nesting strategies: 0x00000000 = None 0x00000001 = Strategy1 0x00000002 = Strategy2 0x00000004 = Strategy3 0x00000008 = Strategy4 0x00000010 = Strategy5 0x00000020 = Strategy6 0x00000040 = Strategy7 0x00000080 = Strategy8 0x00000100 = Strategy9 0x00000200 = Strategy10 0x00000400 = Block nesting 0x00000800 = Block optimization 0x00001000 = IntelliNest 0x00002000 = IC Profile nesting 0x00004000 = IC Pattern and fill 0x80000000 = Manual nesting
cMaxTorches	tinyint	Maximum number of torches on nest
dMaxTorchSpacing	float	Maximum torch spacing used on nest
dLength	float	Sheet length
dWidth	float	Sheet width
dArea	float	Sheet area
ixMaterial	int	Record index of material used
dLengthUsed	float	Length of plate used by nested parts
dWidthUsed	float	Width of plate used by nested parts
dCropUtil	float	Nested utilization of parts inside of crop (if one exists) (Nested part area / (sheet area – area of remnants saved from nest))
dPartArea	float	Total area of nested parts

dTrueArea	float	Plate area used by nested parts (True area of sheet. For skeletons, this excludes the area of the cutouts.)

dbo.Material

The material type (name), thickness and grade

Column	Data type	Remarks
ixMaterial	int IDENTITY (1,1) PRIMARY KEY CLUSTERED,	
sName	nvarchar(40)	Material type, for instance "MS" or "SS"
dThickness	float	Material thickness
sGrade	nvarchar(40)	Material grade

dbo.PlateType

Plate type (used in the Nest table)

Column	Data type	Remarks
ixPlateType	tinyint PRIMARY KEY CLUSTERED	0 = Rectangle 1 = Circle 2 = Remnant 3 = Skeleton
sName	nvarchar(25)	

dbo.AutoNest

Records automatic nesting data

Column	Data type	Remarks
ixAutoNest	int IDENTITY(1,1) PRIMARY KEY CLUSTERED	
ixSession	int	
ixAutoNestStrategy	tinyint	
ixBeginNestingOn	tinyint	
ixNewNestType	tinyint	
ixCustomPlateType	tinyint	
dCustomPlateLength	float	
dCustomPlateWidth	float	

cCustomPlate	int	
sSafeZones	nvarchar(128)	
cTorches tinyint	tinyint	
ixTorchSelection	tinyint	
ixTorchSpacingType	tinyint	
dTorchSpacing	float	
dtStart	datetime	
dtEnd	datetime	
fAllPartsNested	tinyint	

dbo.AutoNestStrategy

Records information about automatic nesting strategies used

Column	Data type	Remarks
ixAutoNestStrategy	tinyint PRIMARY KEY CLUSTERED,	0 = Rectangular 1= Rectangular Optimization 2 = Strategy 1 3 = Strategy 2 4 = Strategy 3 5 = Strategy 4 6 = Strategy 5 7 = Strategy 6 8 = Strategy 7 9 = Strategy 8 10 = Strategy 9 11 = Strategy 10
sName	nvarchar(25)	

dbo.BeginNestingOn

Records information about the nest that automatic nesting begins on

Column	Data type	Remarks
ixBeginNestingOn	tinyint PRIMARY KEY CLUSTERED,	0 = First Nest 1= Current Nest 2 = New Nest
sName	nvarchar(25)	

dbo.NewNestType

Records information about the nest that automatic nesting begins on

Column	Data type	Remarks
ixNewNestType	tinyint PRIMARY KEY CLUSTERED,	0 = (None) 1= Plate List 2 = Custom
sName	nvarchar(25)	

dbo.CustomPlateType

Records information about the custom plates (if any) that automatic nesting uses

Column	Data type	Remarks
ixCustomPlateType	tinyint PRIMARY KEY CLUSTERED,	0 = Rectangular 1= Circular 2 = Remnant
sName	nvarchar(25)	

dbo.TorchSelection

Torch selection settings used during AutoNest

Column	Data type	Remarks
ixTorchSelection	tinyint PRIMARY KEY CLUSTERED	0 = Fixed 1 = Fixed, Then One 2 = Variable
sName	nvarchar(25)	

dbo.TorchSpacingType

Torch spacing settings used during AutoNest

Column	Data type	Remarks
ixTorchSpacingType	tinyint PRIMARY KEY CLUSTERED,	0 = Equal 1 = Fixed 2 = Variable
sName	nvarchar(25)	

dbo.CeipEvent

CEIP event data

Column	Data type	Remarks
ixCeipEvent	int IDENTITY(1, 1) PRIMARY KEY CLUSTERED	
ixSession	int	
ixCeipEventSource	int	
ixCeipEventType	tinyint	
dt	datetime	
ixNextCeipEvent	int	
fProcessed	tinyint	

	DEFAULT(0)	

dbo.CeipEventSource

CEIP event data

Column	Data type	Remarks
ixCeipEventSource	int PRIMARY KEY CLUSTERED	
ixCeipEventSourceOwner	int	
sName	nvarchar(128)	

dbo.CeipEventSourceOwner

CEIP event data

Column	Data type	Remarks
ixCeipEventSourceOwner	int PRIMARY KEY CLUSTERED	
sName	nvarchar(128)	

dbo.CeipEventType

CEIP event data

Column	Data type	Remarks
ixCeipEventType	tinyint PRIMARY KEY CLUSTERED	
sName	nvarchar(20)	

dbo.Performance

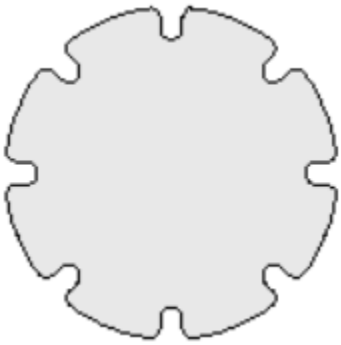
Records CEIP performance statistics

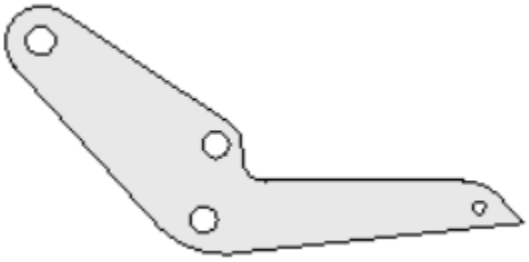
Column	Data type	Remarks
ixPerformance	int IDENTITY(1, 1) PRIMARY KEY CLUSTERED	
cQueued	int	
cRejected	int	
cProcessed	int	
iQueueSize	int	
iAvgSizeReceived	int	
iAvgSizeDecoded	int	
dAvgResponseTime	float	
dAvgProcessTime	float	

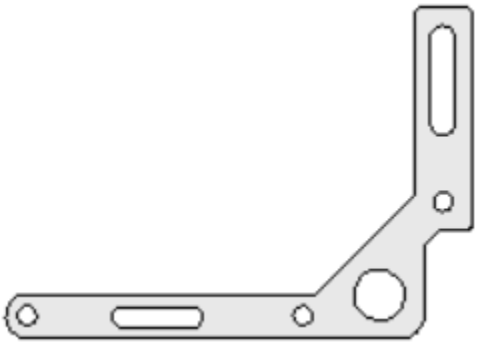
dt	datetime	

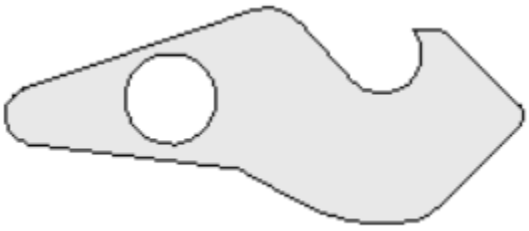
REFERENCE DIAGRAMS

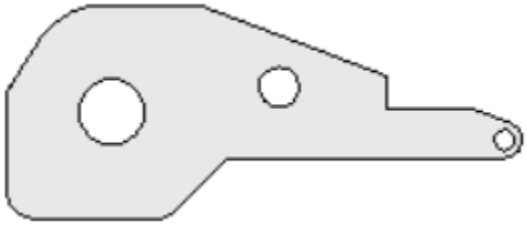
Part attributes

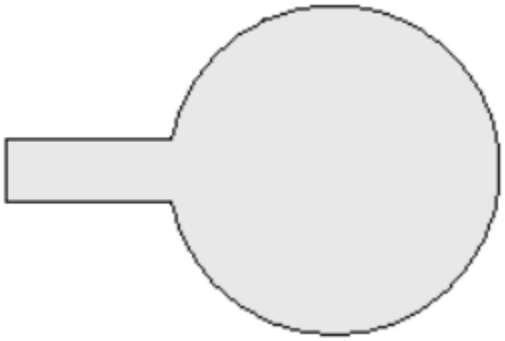


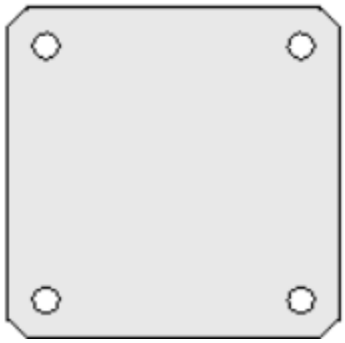


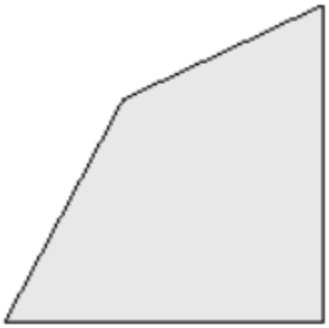












Nest attributes

REFERENCE

Locale - LCID table

From Microsoft (http://msdn.microsoft.com/en-us/goglobal/bb964664.aspx). LCID Dec codes is used by CEIP.

Language - Country/Region	LCID Hex	LCID Dec
Afrikaans - South Africa	0436	1078
Albanian - Albania	041c	1052
Alsatian	0484	1156
Amharic - Ethiopia	045e	1118
Arabic - Saudi Arabia	0401	1025
Arabic - Algeria	1401	5121
Arabic - Bahrain	3c01	15361
Arabic - Egypt	0c01	3073
Arabic - Iraq	0801	2049
Arabic - Jordan	2c01	11265
Arabic - Kuwait	3401	13313
Arabic - Lebanon	3001	12289
Arabic - Libya	1001	4097
Arabic - Morocco	1801	6145
Arabic - Oman	2001	8193
Arabic - Qatar	4001	16385
Arabic - Syria	2801	10241
Arabic - Tunisia	1c01	7169
Arabic - U.A.E.	3801	14337
Arabic - Yemen	2401	9217
Armenian - Armenia	042b	1067
Assamese	044d	1101
Azeri (Cyrillic)	082c	2092
Azeri (Latin)	042c	1068
Bashkir	046d	1133
Basque	042d	1069
Belarusian	0423	1059
Bengali (India)	0445	1093
Bengali (Bangladesh)	0845	2117
Bosnian (Bosnia/Herzegovina)	141A	5146
Breton	047e	1150
Bulgarian	0402	1026
Burmese	0455	1109
Catalan	0403	1027
Cherokee - United States	045c	1116
Chinese - People's Republic of China	0804	2052

Language - Country/Region	LCID Hex	LCID Dec
Chinese - Singapore	1004	4100
Chinese - Taiwan	0404	1028
Chinese - Hong Kong SAR	0c04	3076
Chinese - Macao SAR	1404	5124
Corsican	0483	1155
Croatian	041a	1050
Croatian (Bosnia/Herzegovina)	101a	4122
Czech	0405	1029
Danish	0406	1030
Dari	048c	1164
Divehi	0465	1125
Dutch - Netherlands	0413	1043
Dutch - Belgium	0813	2067
Edo	0466	1126
English - United States	0409	1033
English - United Kingdom	0809	2057
English - Australia	0c09	3081
English - Belize	2809	10249
English - Canada	1009	4105
English - Caribbean	2409	9225
English - Hong Kong SAR	3c09	15369
English - India	4009	16393
English - Indonesia	3809	14345
English - Ireland	1809	6153
English - Jamaica	2009	8201
English - Malaysia	4409	17417
English - New Zealand	1409	5129
English - Philippines	3409	13321
English - Singapore	4809	18441
English - South Africa	1c09	7177
English - Trinidad	2c09	11273
English - Zimbabwe	3009	12297
Estonian	0425	1061
Faroese	0438	1080
Farsi	0429	1065
Filipino	0464	1124
Finnish	040b	1035
French - France	040c	1036
French - Belgium	080c	2060
French - Cameroon	2c0c	11276
French - Canada	0c0c	3084
French - Democratic Rep. of Congo	240c	9228
French - Cote d'Ivoire	300c	12300
French - Haiti	3c0c	15372
French - Luxembourg	140c	5132
French - Mali	340c	13324

Language - Country/Region	LCID Hex	LCID Dec
French - Monaco	180c	6156
French - Morocco	380c	14348
French - North Africa	e40c	58380
French - Reunion	200c	8204
French - Senegal	280c	10252
French - Switzerland	100c	4108
French - West Indies	1c0c	7180
Frisian - Netherlands	0462	1122
Fulfulde - Nigeria	0467	1127
FYRO Macedonian	042f	1071
Galician	0456	1110
Georgian	0437	1079
German - Germany	0407	1031
German - Austria	0c07	3079
German - Liechtenstein	1407	5127
German - Luxembourg	1007	4103
German - Switzerland	0807	2055
Greek	0408	1032
Greenlandic	046f	1135
Guarani - Paraguay	0474	1140
Gujarati	0447	1095
Hausa - Nigeria	0468	1128
Hawaiian - United States	0475	1141
Hebrew	040d	1037
Hindi	0439	1081
Hungarian	040e	1038
Ibibio - Nigeria	0469	1129
Icelandic	040f	1039
Igbo - Nigeria	0470	1136
Indonesian	0421	1057
Inuktitut	045d	1117
Irish	083c	2108
Italian - Italy	0410	1040
Italian - Switzerland	0810	2064
Japanese	0411	1041
K'iche	0486	1158
Kannada	044b	1099
Kanuri - Nigeria	0471	1137
Kashmiri	0860	2144
Kashmiri (Arabic)	0460	1120
Kazakh	043f	1087
Khmer	0453	1107
Kinyarwanda	0487	1159
Konkani	0457	1111
Korean	0412	1042
Kyrgyz (Cyrillic)	0440	1088

Language - Country/Region	LCID Hex	LCID Dec
Lao	0454	1108
Latin	0476	1142
Latvian	0426	1062
Lithuanian	0427	1063
Luxembourgish	046e	1134
Malay - Malaysia	043e	1086
Malay - Brunei Darussalam	083e	2110
Malayalam	044c	1100
Maltese	043a	1082
Manipuri	0458	1112
Maori - New Zealand	0481	1153
Mapudungun	0471	1146
Marathi	044e	1102
Mohawk	047c	1148
Mongolian (Cyrillic)	0450	1104
Mongolian (Mongolian)	0850	2128
Nepali	0461	1121
Nepali - India	0861	2145
Norwegian (Bokmål)	0414	1044
Norwegian (Nynorsk)	0814	2068
Occitan	0482	1154
Oriya	0448	1096
Oromo	0472	1138
Papiamentu	0479	1145
Pashto	0463	1123
Polish	0415	1045
Portuguese - Brazil	0416	1046
Portuguese - Portugal	0816	2070
Punjabi	0446	1094
Punjabi (Pakistan)	0846	2118
Quecha - Bolivia	046B	1131
Quecha - Ecuador	086B	2155
Quecha - Peru	0C6B	3179
Rhaeto-Romanic	0417	1047
Romanian	0418	1048
Romanian - Moldava	0818	2072
Russian	0419	1049
Russian - Moldava	0819	2073
Sami (Lappish)	043b	1083
Sanskrit	044f	1103
Scottish Gaelic	043c	1084
Sepedi	046c	1132
Serbian (Cyrillic)	0c1a	3098
Serbian (Latin)	081a	2074
Sindhi - India	0459	1113
Sindhi - Pakistan	0859	2137

Language - Country/Region	LCID Hex	LCID Dec
Sinhalese - Sri Lanka	045b	1115
Slovak	041b	1051
Slovenian	0424	1060
Somali	0477	1143
Sorbian	042e	1070
Spanish - Spain (Modern Sort)	0c0a	3082
Spanish - Spain (Traditional Sort)	040a	1034
Spanish - Argentina	2c0a	11274
Spanish - Bolivia	400a	16394
Spanish - Chile	340a	13322
Spanish - Colombia	240a	9226
Spanish - Costa Rica	140a	5130
Spanish - Dominican Republic	1c0a	7178
Spanish - Ecuador	300a	12298
Spanish - El Salvador	440a	17418
Spanish - Guatemala	100a	4106
Spanish - Honduras	480a	18442
Spanish - Latin America	580a	22538
Spanish - Mexico	080a	2058
Spanish - Nicaragua	4c0a	19466
Spanish - Panama	180a	6154
Spanish - Paraguay	3c0a	15370
Spanish - Peru	280a	10250
Spanish - Puerto Rico	500a	20490
Spanish - United States	540a	21514
Spanish - Uruguay	380a	14346
Spanish - Venezuela	200a	8202
Sutu	0430	1072
Swahili	0441	1089
Swedish	041d	1053
Swedish - Finland	081d	2077
Syriac	045a	1114
Tajik	0428	1064
Tamazight (Arabic)	045f	1119
Tamazight (Latin)	085f	2143
Tamil	0449	1097
Tatar	0444	1092
Telugu	044a	1098
Thai	041e	1054
Tibetan - Bhutan	0851	2129
Tibetan - People's Republic of China	0451	1105
Tigrigna - Eritrea	0873	2163
Tigrigna - Ethiopia	0473	1139
Tsonga	0431	1073
Tswana	0432	1074
Turkish	041f	1055

Language - Country/Region	LCID Hex	LCID Dec
Turkmen	0442	1090
Uighur - China	0480	1152
Ukrainian	0422	1058
Urdu	0420	1056
Urdu - India	0820	2080
Uzbek (Cyrillic)	0843	2115
Uzbek (Latin)	0443	1091
Venda	0433	1075
Vietnamese	042a	1066
Welsh	0452	1106
Wolof	0488	1160
Xhosa	0434	1076
Yakut	0485	1157
Yi	0478	1144
Yiddish	043d	1085
Yoruba	046a	1130
Zulu	0435	1077
HID (Human Interface Device)	04ff	1279