

SGML entities in (L^A)T_EX: sgmlent.sty

T. Hoekwater

Abstract

This package provides an easy-to-use interface to the SGML character entity sets (ISO 8879, Annex D). All entity sets defined in the Annex are supported, but there are still some minor problems.

Keywords: SGML entities, structural SGML entity conversions, SGML -> T_EX

1 Overview

This package requires the packages/distributions `amsmath`, `wasysym` and quite some fonts, of which most are included with the package `sgmlent`.

All of the entities defined in Annex D of the standard are given a 'standardized' L^AT_EX name. This is intended to make SGML \implies L^AT_EX conversion easier. The final sections of this article list all the entities, together with their graphic representation, and some technical notes where needed.

2 Naming of entities

The naming scheme that is use for the T_EX macros is slightly verbose, but more importantly, it is consistent. Conversion from the names used in the annex to the L^AT_EX commands can be done using only four simple rules:

1. **All entity names are prefixed with `\sgm`**
2. **All macro names end with `;` (semicolon).**
This makes it easier to maintain correct spacing, since T_EX will not ignore space characters after the `;`. Although this means the macros break for instance if you use letterspaced text, in my opinion it is more important that the conversions I write can completely ignore spacing around entities.
3. **In the SGML names, all numbers are converted to english words.**
Note that this is single character-based, so that '1' becomes 'one', '6' becomes 'six' but '90' becomes 'ninezero'.
4. **A dot in the entity name (as in the "Alternative Greek Symbols") is replaced with a "d".**

Here are some examples:

```
&blk14; becomes \sgmblkonefour;
&Aacute; becomes \sgmAacute;
&b.eta; becomes \sgmbdeta;
&darr2; becomes \sgmdarrtwo;
```

This is done throughout. You should always be able to generate the T_EX name from the entity name quite easily.

3 Usability constraints

Although this package will also run under T_EX and L^AT_EX209, best results are obtained by using L^AT_EX2_ε with T1 encoding on a PostScript output device.

4 Requirements

4.1 Required extra packages/macro files

The functionality of the 'amsmath' and 'wasysym' packages (resp. `amsmath.tex` and `wasysym.tex` for T_EX) is needed. Because of the size of the corresponding fonts, these are not contained within the distribution of this style-file.

For now, the package depends on the definitions made by those packages. The need for the `amstex` macros may change in the future, but the dependency on the AMS fonts will definitely remain.

4.2 Required fonts

Following the need for 'amsmath' and 'wasysym', you will also need to have the corresponding fonts installed. The fontfamily "wncyr" is included with the `amsmath` distribution, and is used for the Cyrillic entities.

The entities `\sgmxcross;` (X), `\sgmstar;` (☆) and `\sgmsex;` (★) depend on the PostScript font `ZapfDingbats`. Metrics are included in the distribution of this package.

Unfortunately, there is no PostScript Type 1 font for the Waldi symbol font, but maybe it is possible to find different characters in other fonts and merge them together in the future. At the moment, I do not have enough spare time to investigate this option.

The monotoniko greek entities (`grk1` and `grk2`) use the `mrg` fonts by Yannis Haramboulos.

5 What needs to be done yet

- More testing.
- Less dependencies on external macros.

- A merged font would be nice, instead of borrowing from 6 different symbol fonts.
- Better behaviour under non-T1 font encodings.
- Option to bind the correct entities to inputenc.
- Some characters should be changed to look better.

6 Known problems and shortcomings

There are problems (as usual) under T_EX and L^AT_EX209 with respect to sizes and font styles for the characters that are not symbols.

PostScript fonts typically do not contain the glyphs for eng, ENG and dotlessj (and some other also, but these three bother us).

7 Full list of control sequences and their graphical representation

7.1 iso-amsa.def

\curvearrowright	<code>\sgmcularr;</code>	\leftrightarrow	<code>\sgmharr;</code>	\nrightarrow	<code>\sgmnrArr;</code>	\swarrow	<code>\sgmdlarr;</code>
\curvearrowleft	<code>\sgmcurarr;</code>	\Uparrow	<code>\sgmlrarrtwo;</code>	\nearrow	<code>\sgmnwarr;</code>	\Uparrow	<code>\sgmuArr;</code>
\Downarrow	<code>\sgmdArr;</code>	\Uparrow	<code>\sgmlrarrtwo;</code>	\circlearrowleft	<code>\sgmolarr;</code>	\Uparrow	<code>\sgmuarrtwo;</code>
\Downarrow	<code>\sgmdarrtwo;</code>	\rightsquigarrow	<code>\sgmharrw;</code>	\circlearrowright	<code>\sgmorarr;</code>	\Updownarrow	<code>\sgmvArr;</code>
\downarrow	<code>\sgmdharl;</code>	\Rightarrow	<code>\sgmlharttwo;</code>	\Rightarrow	<code>\sgmrAarr;</code>	\Updownarrow	<code>\sgmvarr;</code>
\downarrow	<code>\sgmdharr;</code>	\Rightarrow	<code>\sgmlrharttwo;</code>	\rightarrow	<code>\sgmRarr;</code>	\uparrow	<code>\sgmuharl;</code>
\Leftarrow	<code>\sgmlAarr;</code>	\uparrow	<code>\sgmlsh;</code>	\Uparrow	<code>\sgmrarrtwo;</code>	\uparrow	<code>\sgmuharr;</code>
\leftarrow	<code>\sgmLarr;</code>	\mapsto	<code>\sgmmap;</code>	\rightarrow	<code>\sgmrarrhk;</code>	\Leftarrow	<code>\sgmxlArr;</code>
\Leftarrow	<code>\sgmlarrtwo;</code>	\circ	<code>\sgmmumap;</code>	\rightarrow	<code>\sgmrarrlp;</code>	\Leftrightarrow	<code>\sgmxhArr;</code>
\rightarrow	<code>\sgmlarrhk;</code>	\nearrow	<code>\sgmnearr;</code>	\rightarrow	<code>\sgmrarrtl;</code>	\leftrightarrow	<code>\sgmxharr;</code>
\rightarrow	<code>\sgmlarrlp;</code>	\nrightarrow	<code>\sgmnlArr;</code>	\rightsquigarrow	<code>\sgmrarrw;</code>	\Rightarrow	<code>\sgmxrArr;</code>
\rightarrow	<code>\sgmlarrtl;</code>	\nrightarrow	<code>\sgmnlarr;</code>	\rightarrow	<code>\sgmrhard;</code>		
\dashrightarrow	<code>\sgmlhard;</code>	\nrightarrow	<code>\sgmnhArr;</code>	\rightarrow	<code>\sgmrharu;</code>		
\dashrightarrow	<code>\sgmlharu;</code>	\nrightarrow	<code>\sgmnharr;</code>	\rightarrow	<code>\sgmrsh;</code>		
\nrightarrow	<code>\sgmhArr;</code>	\nrightarrow	<code>\sgmnrarr;</code>	\searrow	<code>\sgmdrarr;</code>		

7.2 iso-amsb.def

I am quite unhappy with shape of the `\sgmBarwed`; ($\overline{\wedge}$) and `\sgmbarwed`; ($\overline{\wedge}$) entities.

\amalg	<code>\sgmamalg;</code>	\times	<code>\sgmltimes;</code>	\dagger	<code>\sgmplusdo;</code>	\top	<code>\sgmtop;</code>
$\overline{\wedge}$	<code>\sgmBarwed;</code>	\square	<code>\sgmminusb;</code>	\sphericalangle	<code>\sgmrthree;</code>	\oplus	<code>\sgmuplus;</code>
$\overline{\wedge}$	<code>\sgmbarwed;</code>	\otimes	<code>\sgmoast;</code>	\times	<code>\sgmrtime;</code>	\wr	<code>\sgmwreath;</code>
\cap	<code>\sgmCap;</code>	\odot	<code>\sgmocir;</code>	\cdot	<code>\sgmsdot;</code>	\circ	<code>\sgmxcirc;</code>
\cup	<code>\sgmCup;</code>	\ominus	<code>\sgmodash;</code>	\square	<code>\sgmsdotb;</code>	∇	<code>\sgmxdtri;</code>
\vee	<code>\sgmcuvee;</code>	\odot	<code>\sgmodot;</code>	\setminus	<code>\sgmsetmn;</code>	Δ	<code>\sgmxutri;</code>
\wedge	<code>\sgmcuwed;</code>	\ominus	<code>\sgmominus;</code>	\sqcap	<code>\sgmsqcap;</code>	\amalg	<code>\sgmcoprod;</code>
\diamond	<code>\sgmdiam;</code>	\oplus	<code>\sgmoplus;</code>	\sqcup	<code>\sgmsqcup;</code>	\prod	<code>\sgmprod;</code>
$*$	<code>\sgmdivonx;</code>	\oslash	<code>\sgmosol;</code>	\setminus	<code>\sgmssetmn;</code>	\sum	<code>\sgmsum;</code>
\top	<code>\sgmintcal;</code>	\otimes	<code>\sgmotimes;</code>	\star	<code>\sgmsstarf;</code>		
λ	<code>\sgmlthree;</code>	\boxplus	<code>\sgmplusb;</code>	\boxtimes	<code>\sgmtimeb;</code>		

7.3 iso-amsc.def

\lceil	<code>\sgmrceil;</code>	\lrcorner	<code>\sgmurcorn;</code>	\lfloor	<code>\sgmlfloor;</code>	\llcorner	<code>\sgmdlcorn;</code>
\rfloor	<code>\sgmrfloor;</code>	\lrcorner	<code>\sgmdrcorn;</code>	$\not\propto$	<code>\sgmlpargt;</code>		
\gtrdot	<code>\sgmrpargt;</code>	\lceil	<code>\sgmlceil;</code>	\ulcorner	<code>\sgmulcorn;</code>		

7.4 iso-amsn.def

∇	<code>\sgmgnap;</code>	∇	<code>\sgmgvnE;</code>	∇	<code>\sgmlnsim;</code>	\neq	<code>\sgmnequiv;</code>
∇	<code>\sgmgne;</code>	∇	<code>\sgmlnap;</code>	∇	<code>\sgmlvnE;</code>	\neq	<code>\sgmngE;</code>
∇	<code>\sgmgnE;</code>	∇	<code>\sgmlnE;</code>	∇	<code>\sgmnap;</code>	\neq	<code>\sgmngE;</code>
∇	<code>\sgmgnsim;</code>	∇	<code>\sgmlne;</code>	∇	<code>\sgmncong;</code>	\neq	<code>\sgmnges;</code>

∇ \sgmngt;	∇ \sgmnrtri;	∇ \sgmnsup;	∇ \sgmscnE;
∇ \sgmnlE;	∇ \sgmnrtrie;	∇ \sgmnsupE;	∇ \sgmscnsim;
∇ \sgmnlE;	∇ \sgmnsC;	∇ \sgmnsupe;	∇ \sgmsubne;
∇ \sgmnles;	∇ \sgmnsce;	∇ \sgmnvdash;	∇ \sgmsubnE;
∇ \sgmnlT;	∇ \sgmnsim;	∇ \sgmnvDash;	∇ \sgmsupne;
∇ \sgmnltri;	∇ \sgmnsime;	∇ \sgmnVDash;	∇ \sgmsupnE;
∇ \sgmnltrie;	∇ \sgmnsmid;	∇ \sgmnVdash;	∇ \sgmvsubnE;
∇ \sgmnmid;	∇ \sgmnspar;	∇ \sgmprnap;	∇ \sgmvsubne;
∇ \sgmnpaR;	∇ \sgmnsub;	∇ \sgmprnE;	∇ \sgmvsupne;
∇ \sgmnpR;	∇ \sgmnsube;	∇ \sgmprnsim;	∇ \sgmvsupnE;
∇ \sgmnpRe;	∇ \sgmnsubE;	∇ \sgmnsCnap;	

7.5 iso-amso.def

There are a few problems with \sgminodot; (*i*) and \sgmjnodot; (*j*). At the moment, I allow only the math versions of these two entities, because most PostScript font do not even have *j*, but the problem is internal to the macros: I typesets either the text or the math version, and cannot decide which to use. This is a bug and should be fixed asap.

\angle \sgmang;	\top \sgmdaleth;	ι \sgminodot;	\Re \sgmreal;
\angle \sgmangmsd;	ℓ \sgmell;	j \sgmjnodot;	\backslash \sgmsbsol;
\sqcap \sgmbeth;	\emptyset \sgmempty;	$\#$ \sgmnexist;	\prime \sgmvprime;
\backslash \sgmbprime;	\beth \sgmgimel;	\textcircled{S} \sgmoS;	\wp \sgmweierp;
\mathcal{C} \sgmcomp;	\mathfrak{C} \sgmimage;	\hbar \sgmplanck;	

7.6 iso-amr.def

\sgmecolon; (=), \sgmcolone; (:=) and \sgmveebar; (\vee) look silly. And all waves from the AMS fonts look a bit childish, but i am afraid to change those, because it would create two new fonts and even more confusion.

\approx \sgmape;	\equiv \sgmerDot;	\lesssim \sgmlsim;	\sqsupset \sgmsqsup;
\asymp \sgmasymp;	\pitchfork \sgmfork;	\ll \sgmLt;	\sqsupseteq \sgmsqsupe;
\cong \sgmbcong;	\frown \sgmfrown;	\triangleleft \sgmltrie;	\smile \sgmssmile;
\bumpeq \sgmbepsi;	\sphericalangle \sgmgap;	\perp \sgmmid;	\Subset \sgmSub;
\bowtie \sgmbowtie;	$\dot{\sphericalangle}$ \sgmgdsdot;	\models \sgmmodels;	\supseteq \sgmsubE;
\sim \sgmbsim;	\sphericalangle \sgmgE;	\sphericalangle \sgmpr;	\supsetneq \sgmSup;
\simeq \sgmbsime;	\sphericalangle \sgmgel;	\sphericalangle \sgmprap;	\supsetneq \sgmsupE;
\bumpeq \sgmbump;	\sphericalangle \sgmgEl;	\sphericalangle \sgmpre;	\thickapprox \sgmthkap;
\bumpeq \sgmbumpe;	\sphericalangle \sgmgEs;	\sphericalangle \sgmprsim;	\thickapprox \sgmthksim;
\circ \sgmcire;	\gg \sgmGg;	\triangleleft \sgmrtrie;	\trianglelefteq \sgmtrie;
\coloneqq \sgmcolone;	\gtrsim \sgmgl;	\sqcap \sgmsamalg;	\times \sgmtwixt;
\cuepr \sgmcuepr;	\gtrsim \sgmgsim;	\sphericalangle \sgmsc;	\vdash \sgmvdash;
\cuesc \sgmcuesc;	\gtrsim \sgmGt;	\sphericalangle \sgmscap;	\Vdash \sgmVdash;
\cup \sgmcupre;	\gtrsim \sgmlap;	\sphericalangle \sgmsccue;	\Vdash \sgmvDash;
\dashv \sgmdashv;	\gtrsim \sgmldot;	\sphericalangle \sgmsce;	\vee \sgmveebar;
\ecir \sgmecir;	\gtrsim \sgmlE;	\sphericalangle \sgmscsim;	\triangleleft \sgmvltri;
\ecolon \sgmecolon;	\gtrsim \sgmlEg;	\sphericalangle \sgmsfrown;	\propto \sgmvprop;
\edot \sgmeDot;	\gtrsim \sgmlEg;	\sphericalangle \sgmsmid;	\triangleright \sgmvrtri;
\esdot \sgmesdot;	\gtrsim \sgmlEg;	\sphericalangle \sgmSmile;	\Vdash \sgmVvdash;
\efdot \sgmefDot;	\gtrsim \sgmlEg;	\sphericalangle \sgmspar;	
\megs \sgmegs;	\gtrsim \sgmlg;	\sqsubset \sgmsqsub;	
\mels \sgmels;	\ll \sgmLl;	\sqsubseteq \sgmsqsube;	

7.7 iso-grk1.def

The greek macros are only used if you specify \havegreek in your document. I added this protection to guard against loading even more fonts into T_EX that may not be needed.

Also, the entities from greek 1 and greek 2 are intended for words, not symbols, which is why the macros typeset the lower cased ones in roman type.

These try to follow the style of surrounding text, both in shape and in size (same applies to the cyrillic entities that will follow).

α \sgmagr;	H \sgmEEgr;	ξ \sgmxgr;	υ \sgmugr;
A \sgmAgr;	θ \sgmthgr;	Ξ \sgmXgr;	Υ \sgmUgr;
β \sgmbgr;	Θ \sgmTHgr;	\omicron \sgmogr;	φ \sgmphgr;
B \sgmBgr;	ι \sgmiigr;	O \sgmOgr;	Φ \sgmPHgr;
γ \sgmggr;	I \sgmIgr;	π \sgmpgr;	χ \sgmkhgr;
Γ \sgmGgr;	κ \sgmkgr;	Π \sgmPgr;	X \sgmKHgr;
δ \sgmdgr;	K \sgmKgr;	ρ \sgmrgr;	ψ \sgmpsgr;
Δ \sgmDgr;	λ \sgmlgr;	P \sgmRgr;	Ψ \sgmPSgr;
ϵ \sgmegr;	Λ \sgmLgr;	σ \sgmsgr;	ω \sgmohgr;
E \sgmEgr;	μ \sgmmgr;	Σ \sgmSgr;	Ω \sgmOHgr;
ζ \sgmzgr;	M \sgmMgr;	ς \sgmsfgr;	
Z \sgmZgr;	ν \sgmngr;	τ \sgmtgr;	
η \sgmeegr;	N \sgmNgr;	T \sgmTgr;	

7.8 iso-grk2.def

$\acute{\alpha}$ \sgmaacgr;	$\grave{\iota}$ \sgmidigr;	O \sgmOacgr;	$\acute{\omega}$ \sgmohacgr;
A \sgmAacgr;	$\grave{\text{I}}$ \sgmIdigr;	$\ddot{\text{U}}$ \sgmudigr;	O \sgmOHacgr;
$\acute{\epsilon}$ \sgmeacgr;	$\grave{\iota}$ \sgmiacgr;	Y \sgmUdigr;	
E \sgmEacgr;	I \sgmIacgr;	$\acute{\upsilon}$ \sgmuacgr;	
$\grave{\eta}$ \sgmeeacgr;	$\grave{\text{I}}$ \sgmidiagr;	Y \sgmUacgr;	
H \sgmEEacgr;	$\acute{\omicron}$ \sgmoacgr;	$\ddot{\text{U}}$ \sgmudiagr;	

7.9 iso-grk3.def

α \sgmalpha;	η \sgmeta;	ξ \sgmxi;	υ \sgmupsi;
β \sgmbeta;	θ \sgmthetas;	Ξ \sgmXi;	Υ \sgmUpsi;
γ \sgmgamma;	Θ \sgmTheta;	π \sgmpi;	ϕ \sgmphis;
Γ \sgmGamma;	ϑ \sgmthetav;	ϖ \sgmpiv;	Φ \sgmPhi;
F \sgmgammad;	ι \sgmiota;	Π \sgmPi;	φ \sgmphiv;
δ \sgmdelta;	κ \sgmkappa;	ρ \sgmrho;	χ \sgmchi;
Δ \sgmDelta;	κ \sgmkappav;	ϱ \sgmrhov;	ψ \sgmpsi;
ϵ \sgmepsi;	λ \sgmlambda;	σ \sgmsigma;	Ψ \sgmPsi;
ϵ \sgmepsiv;	Λ \sgmLambda;	Σ \sgmSigma;	ω \sgmomega;
ϵ \sgmepsis;	μ \sgmmu;	ς \sgmsigmav;	Ω \sgmOmega;
ζ \sgmzeta;	ν \sgmnu;	τ \sgmtau;	

7.10 iso-grk4.def

Wat is a variation? The common interpretation seems to be boldface, so these are all boldface (hence the 'b' in the name).

α \sgmbdalpha;	η \sgmbdeta;	ξ \sgmbdxi;	υ \sgmbdupsi;
β \sgmbdbeta;	θ \sgmbdthetas;	Ξ \sgmbdXi;	Υ \sgmbdUpsi;
γ \sgmbdgamma;	Θ \sgmbdTheta;	π \sgmbdpi;	ϕ \sgmbdphis;
Γ \sgmbdGamma;	ϑ \sgmbdthetav;	ϖ \sgmbdpiv;	Φ \sgmbdPhi;
F \sgmbdgammad;	ι \sgmbdiota;	Π \sgmbdPi;	φ \sgmbdphiv;
δ \sgmbddelta;	κ \sgmbdkappa;	ρ \sgmbdrho;	χ \sgmbdchi;
Δ \sgmbdDelta;	κ \sgmbdkappav;	ϱ \sgmbdrhov;	ψ \sgmbdpsi;
ϵ \sgmbdepsi;	λ \sgmbdlambda;	σ \sgmbdsigma;	Ψ \sgmbdPsi;
ϵ \sgmbdepsiv;	Λ \sgmbdLambda;	Σ \sgmbdSigma;	ω \sgmbdomega;
ϵ \sgmbdepsis;	μ \sgmbdmu;	ς \sgmbdsigmav;	Ω \sgmbdOmega;
ζ \sgmbdzeta;	ν \sgmbdnu;	τ \sgmbdtau;	

7.11 iso-lat1.def

á \sgmaacute;	ð \sgmeth;	ï \sgmiuml;	ß \sgmszlig;
Á \sgmAacute;	Ð \sgmETH;	Ï \sgmIuml;	þ \sgmthorn;
â \sgmacirc;	é \sgmeacute;	Ñ \sgmntilde;	Þ \sgmTHORN;
Â \sgmAcirc;	É \sgmEacute;	Ñ̄ \sgmNtilde;	ú \sgmuacute;
à \sgmagrave;	ê \sgmecirc;	ó \sgmoacute;	Ú \sgmUacute;
À \sgmAgrave;	Ê \sgmEcirc;	Ó \sgmOacute;	û \sgmucirc;
å \sgmaring;	è \sgmegrave;	ô \sgmocirc;	Û \sgmUcirc;
Å \sgmAring;	È \sgmEgrave;	Ô \sgmOcirc;	ù \sgmugrave;
ã \sgmatilde;	ë \sgmeuml;	ò \sgmograve;	Û̄ \sgmUgrave;
Ã \sgmAtilde;	Ë \sgmEuml;	Ò \sgmOgrave;	ü \sgmuuml;
ä \sgmauml;	í \sgmiacute;	ø \sgmoslash;	Ü \sgmUuml;
Ä \sgmAuml;	Í \sgmIacute;	Ø \sgmOslash;	ý \sgmyacute;
æ \sgmaelig;	î \sgmicirc;	ō \sgmotilde;	Ý \sgmYacute;
Æ \sgmAElig;	Î \sgmIcirc;	Õ \sgmOtilde;	ÿ \sgmyuml;
ç \sgmccedil;	ì \sgmigrave;	ö \sgmouml;	
Ç \sgmCcedil;	Ì \sgmIgrave;	Ö \sgmOuml;	

7.12 iso-lat2.def

The \sgmdcaron; (d') is correct but ugly.

\sgmjcirc; (j), \sgmeng; (m) and \sgmENG; (M) fail with common PostScript fonts. I decided to ignore the error for the moment since they are very rarely used. Borrowing the eng's from CM looked even worse than the black box :-)

ă \sgmabreve;	Ĝ \sgmGcirc;	ń \sgmnacute;	† \sgmtcedil;
Ă \sgmAbreve;	ğ \sgmgdot;	Ń \sgmNacute;	‡ \sgmTcedil;
ā \sgmamacr;	Ġ \sgmGdot;	■ \sgmeng;	‡ \sgmtstrok;
Ā \sgmAmacr;	ĥ \sgmhcirc;	■ \sgmENG;	‡ \sgmTstrok;
ą \sgmaogon;	Ĥ \sgmHcirc;	'n \sgmnapos;	ü \sgmubreve;
Ą \sgmAogon;	h \sgmhstrok;	ñ \sgmncaron;	Û \sgmUbreve;
ć \sgmcacute;	H \sgmHstrok;	Ñ \sgmNcaron;	ů \sgmudblac;
Ć \sgmCacute;	ı̇ \sgmIdot;	ņ \sgmncedil;	Ů \sgmUdblac;
č \sgmccaron;	Ī \sgmImacr;	Ň \sgmNcedil;	ū \sgmumacr;
Č \sgmCcaron;	ī \sgmimacr;	ô \sgmodblac;	Ū \sgmUmacr;
ĉ \sgmccirc;	ij̇ \sgmijlig;	Õ \sgmOdblac;	u \sgmuogon;
Ĉ \sgmCcirc;	IJ̇ \sgmIJlig;	Ō \sgmOmacr;	U̇ \sgmUogon;
ċ \sgmcdot;	ı̇ \sgmiogon;	ō \sgmomacr;	û \sgmuring;
Č̇ \sgmCdot;	ı̇ \sgmIogon;	œ \sgmoelig;	Û \sgmUring;
d' \sgmdcaron;	ĩ \sgmitilde;	Œ \sgmOElig;	ü \sgmutilde;
Ď \sgmDcaron;	Ī̇ \sgmItilde;	ř \sgmracute;	Û̇ \sgmUtilde;
ď \sgmdstrok;	ı̇ \sgmjcirc;	Ř \sgmRacute;	ŵ \sgmwcirc;
Đ \sgmDstrok;	Ĵ \sgmJcirc;	ř̇ \sgmrcaron;	Ŵ \sgmWcirc;
ě \sgmecaron;	ķ \sgmkcedil;	Ř̇ \sgmRcaron;	ÿ \sgmycirc;
Ě \sgmEcaron;	Ķ \sgmKcedil;	ı̇ \sgmrcedil;	Ŷ \sgmYcirc;
é \sgmedot;	Ķ̇ \sgmkgreen;	Ŕ \sgmRcedil;	ÿ̇ \sgmYuml;
É \sgmEdot;	Í̇ \sgmlacute;	ś \sgmsacute;	ż \sgmzacute;
ē \sgmemacr;	Ĺ̇ \sgmLacute;	Ś \sgmSacute;	Ż \sgmZacute;
Ē \sgmEmacr;	ł̇ \sgmlcaron;	š \sgmscaron;	ž \sgmzcaron;
ę \sgmeogon;	Ł̇ \sgmLcaron;	Ṧ \sgmScaron;	Ž̇ \sgmZcaron;
Ę \sgmEogon;	ł̇ \sgmlcedil;	ş \sgmscedil;	ż \sgmzdot;
ğ \sgmgacute;	Ł̇ \sgmLcedil;	Ş̇ \sgmScedil;	Ž̇ \sgmZdot;
ĝ \sgmgbreve;	ł̇ \sgmlmidot;	ṧ \sgmscirc;	
Ĝ \sgmGbreve;	Ł̇ \sgmLmidot;	Ŝ̇ \sgmScirc;	
ġ \sgmgcedil;	ł̇ \sgmlstrok;	ť \sgmtcaron;	
ĝ̇ \sgmgcirc;	Ł̇ \sgmLstrok;	Ť \sgmTcaron;	

7.13 iso-dia.def

Used an 'a' to show the composition, but this is not the way they are typically used in SGML, so maybe these should be changed to have their natural width (they are now 'real' accents)

á \sgmacute;a	â \sgmcirc;a	à \sgmgrave;a	ã \sgmtilde;a
ä \sgmbreve;a	ã \sgmdblac;a	ā \sgmmacr;a	ä \sgmuuml;a
ǎ \sgmcaron;a	ä \sgmdie;a	ą \sgmogon;a	
ç \sgmcedil;a	à \sgmdot;a	å \sgmring;a	

7.14 iso-pub.def

The grey boxes depend on PostScript output, and of course there is no ‘fj’ ligature in most fonts. The \sgmrx; (R) is very wrong indeed, but it hard to align a composite across different font families. Don’t know how to solve that yet (looks OK in CM though).

\sgmemsp;	$\frac{5}{6}$ \sgmlfracfivesix;	♡ \sgmhearts;	... \sgmmlldr;
\sgmensp;	$\frac{c}{o}$ \sgmincare;	♠ \sgmspades;	“ \sgmrdquor;
\sgmemsponethree;	■ \sgmblock;	✦ \sgmmalt;	‘ \sgmrsquor;
\sgmemsponefour;	▪ \sgmuhblk;	† \sgmdagger;	∴ \sgmvellip;
\sgmnumsp;	■ \sgmlhblk;	‡ \sgmDagger;	– \sgmhybull;
\sgmpuncsp;	▒ \sgmblkonefour;	✓ \sgmcheck;	◇ \sgmloz;
\sgmthinsp;	▒ \sgmblkonetwo;	✗ \sgmxcross;	◆ \sgmlozf;
\sgmhairsp;	■ \sgmblkthreefour;	‡ \sgmsharp;	◁ \sgmltri;
— \sgmmdash;	■ \sgmmarker;	b \sgmflat;	▷ \sgmrtri;
- \sgmndash;	○ \sgmcir;	♂ \sgmmale;	★ \sgmstarf;
- \sgmdash;	□ \sgmsqu;	♀ \sgmfemale;	♠ \sgmnatur;
□ \sgmblank;	□ \sgmrect;	☎ \sgmphone;	℞ \sgmrx;
... \sgmhellip;	△ \sgmutri;	Ⓞ \sgmtelrec;	* \sgmsex;
.. \sgmldr;	▽ \sgmdtri;	Ⓟ \sgmcopy;	⊕ \sgmtarget;
\sgmlfracone;	☆ \sgmstar;	⧸ \sgmcaret;	— \sgmdlcrop;
\sgmlfraconehalf;	● \sgmbull;	, \sgmlsquor;	\sgmdrcrop;
\sgmlfraconefour;	■ \sgmsquf;	„ \sgmldquor;	\sgmdrcrop;
\sgmlfraconefive;	▲ \sgmutrif;	ff \sgmfflig;	\sgmulcrop;
\sgmlfraconetwo;	▼ \sgmdtrif;	fi \sgmfilig;	\sgmulcrop;
\sgmlfraconethree;	◀ \sgmltrif;	fj \sgmfjlig;	\sgmurcrop;
\sgmlfraconefour;	▶ \sgmrtrif;	ffi \sgmffilig;	
\sgmlfraconefive;	♣ \sgmclubs;	ffl \sgmffilig;	
\sgmlfraconesix;	◇ \sgmdiams;	fl \sgmffilig;	

7.15 iso-num.def

\sgmlowbar; () is actually an underlined emspace.

An option should be added to use fraction fonts if available.

1 \sgmfraconetwo;	⊞ \sgmcurren;	Ω \sgmohm;	¡ \sgmiexcl;
2 \sgmfraconefour;	£ \sgmpound;	° \sgmdeg;	’ \sgmquot;
3 \sgmfracthreefour;	\$ \sgmdollar;	◊ \sgmordm;	’ \sgmapos;
4 \sgmfraconeeight;	¢ \sgmcent;	ª \sgmordf;	(\sgmlpar;
5 \sgmfracthreeeight;	¥ \sgmyen;	§ \sgmsect;) \sgmrpar;
6 \sgmfracfiveeight;	# \sgmnum;	¶ \sgmpara;	, \sgmcomma;
7 \sgmfracseveneight;	% \sgmpercnt;	· \sgmmiddot;	— \sgmlowbar;
8 \sgmlsupone;	& \sgmamp;	← \sgmlarr;	- \sgmhyphen;
9 \sgmlsuptwo;	* \sgmast;	→ \sgmrarr;	. \sgmperiod;
10 \sgmlsupthree;	@ \sgmcommat;	↑ \sgmuarr;	/ \sgmsol;
11 \sgmplus;	[\sgmlsqb;	↓ \sgmdarr;	: \sgmcolon;
12 ± \sgmplusmn;	\ \sgmbsol;	© \sgmcopy;	; \sgmsemi;
13 < \sgmlt;] \sgmrsqb;	® \sgmreg;	? \sgmquest;
14 = \sgmequals;	{ \sgmlcub;	™ \sgmtrade;	¿ \sgmiquest;
15 > \sgmgt;	— \sgmhorbar;	¡ \sgmbrvbar;	« \sgmlaquo;
16 ÷ \sgmdivide;	\sgmverbar;	¬ \sgmnot;	» \sgmraquo;
17 × \sgmtimes;	} \sgmrcub;	↓ \sgmsung;	‘ \sgmlsquo;
	μ \sgmmicro;	! \sgmexcl;	’ \sgmrsquo;

“ \sgmldquo; \sgmnbsp;
” \sgmrdquo; \sgmshy;

7.16 iso-tech.def

ℵ	\sgmaleph;	↔	\sgmiff;	⊥	\sgmperp;	Å	\sgmangst;
^	\sgmand;	∞	\sgminfin;	'	\sgmprime;	ℬ	\sgmbernou;
⊥	\sgmangninezero;	∫	\sgmint;	"	\sgmPrime;	◦	\sgmcompfn;
⋈	\sgmangsph;	∈	\sgmisin;	α	\sgmprop;	⋯	\sgmDot;
≈	\sgmap;	⟨	\sgmlang;	√	\sgmradic;	⋯	\sgmDotDot;
∴	\sgmbecaus;	←	\sgmlArr;)	\sgmrang;	ℋ	\sgmhamilt;
⊥	\sgmbottom;	≤	\sgmle;	⇒	\sgmrArr;	ℒ	\sgmlagran;
∩	\sgmcap;	−	\sgmminus;	~	\sgmsim;	*	\sgmlowast;
≅	\sgmcong;	⊕	\sgmnplus;	≈	\sgmsime;	∉	\sgmnotin;
∫	\sgmconint;	∇	\sgmnabla;	□	\sgmsquare;	o	\sgmorder;
∪	\sgmcup;	≠	\sgmne;	⊂	\sgmsub;	ℳ	\sgmphmmat;
≡	\sgmequiv;	∃	\sgmni;	⊆	\sgmsube;	⋯	\sgmtdot;
∃	\sgmexist;	∨	\sgmor;	⊃	\sgmsup;	'''	\sgmtprime;
∀	\sgmforall;	∥	\sgmpar;	⊇	\sgmsupe;	≜	\sgmwedgeq;
f	\sgmfnof;	∂	\sgmpart;	∴	\sgmtherefour;		
≥	\sgmge;	‰	\sgmpermil;	∥	\sgmVerbar;		

7.17 iso-box.def

Don't use these to draw boxes! I only wrote these to be complete, and frankly i don't see a real application for these blocks in print, as drawing is font-dependent in every possible way.

—	\sgmboxh;	┌	\sgmboxvR;	≡	\sgmboxVR;	⌌	\sgmboxUL;
	\sgmboxv;	└	\sgmboxhU;	≡	\sgmboxHU;	⌍	\sgmboxDL;
┌	\sgmboxur;	┐	\sgmboxvL;	≡	\sgmboxVL;	⌎	\sgmboxDr;
└	\sgmboxul;	┘	\sgmboxhD;	≡	\sgmboxHD;	⌏	\sgmboxUr;
┐	\sgmboxdl;	┙	\sgmboxvH;	≡	\sgmboxVH;	⌐	\sgmboxuL;
┘	\sgmboxdr;	┚	\sgmboxH;	≡	\sgmboxVr;	⌑	\sgmboxDl;
┙	\sgmboxvr;	┛	\sgmboxV;	≡	\sgmboxHu;	⌒	\sgmboxdR;
┚	\sgmboxhu;	├	\sgmboxUR;	≡	\sgmboxVl;		
┛	\sgmboxvl;	┤	\sgmboxUL;	≡	\sgmboxHd;		
├	\sgmboxhd;	┥	\sgmboxDL;	≡	\sgmboxVh;		
┤	\sgmboxvh;	┦	\sgmboxDR;	≡	\sgmboxuR;		

7.18 iso-cyr1.def

The cyrillic fonts will only be loaded after you give the command \havecyrillic.

a	\sgmacy;	Ё	\sgmIOcy;	м	\sgmmcy;	Т	\sgmTcy;
А	\sgmAcy;	Ж	\sgmzhcy;	М	\sgmMcy;	У	\sgmUcy;
б	\sgmbcy;	Ѡ	\sgmZHcy;	н	\sgmnicy;	Ф	\sgmficy;
Б	\sgmBcy;	з	\sgmzcy;	Н	\sgmNicy;	Φ	\sgmFicy;
в	\sgmvicy;	З	\sgmZcy;	о	\sgmocy;	х	\sgmkhicy;
В	\sgmVicy;	и	\sgmicy;	О	\sgmOcy;	Х	\sgmKHicy;
г	\sgmgicy;	И	\sgmIcy;	п	\sgmpicy;	ц	\sgmtscy;
Г	\sgmGicy;	Й	\sgmjicy;	П	\sgmPicy;	Ц	\sgmTScy;
д	\sgmdicy;	Ў	\sgmJicy;	р	\sgmrcy;	ч	\sgmchicy;
Д	\sgmDicy;	к	\sgmkicy;	Р	\sgmRicy;	Ч	\sgmCHicy;
e	\sgmieicy;	К	\sgmKicy;	с	\sgmsicy;	ш	\sgmshicy;
Е	\sgmIEicy;	л	\sgmlicy;	С	\sgmScy;	Ш	\sgmSHicy;
ё	\sgmiocy;	Л	\sgmLicy;	т	\sgmticy;		

щ \sgmshchcy;	ы \sgmycy;	э \sgmecy;	я \sgmyacy;
Ш \sgmSHCHcy;	Ы \sgmYcy;	Э \sgmEcy;	Я \sgmYAcy;
ъ \sgmhardcy;	ь \sgmsoftcy;	ю \sgmyucy;	№ \sgmnumero;
Ъ \sgmHARDcy;	Ь \sgmSOFTcy;	Ю \sgmYUcy;	

7.19 iso-cyr2.def

ђ \sgmdjcy;	Ѕ \sgmDScy;	љ \sgmljcy;	Ќ \sgmKJcy;
Ђ \sgmDJcy;	Ї \sgmiukcy;	Љ \sgmLJcy;	Ў \sgmubrky;
ѓ \sgmgjcy;	І \sgmIukcy;	њ \sgmnjcy;	Ў \sgmUbrcy;
Ѓ \sgmGJcy;	Њ \sgmyicy;	Њ \sgmNJcy;	џ \sgmdzcy;
е \sgmjukcy;	Ћ \sgmYIcy;	ћ \sgmtshcy;	Ѣ \sgmDZcy;
Є \sgmJukcy;	Ј \sgmjsercy;	Ќ \sgmTSHcy;	
ѕ \sgmdscy;	Ј \sgmJsercy;	ќ \sgmkjcy;	