**INTERNATIONAL ORGANISATION FOR STANDARDISATION**

**ORGANISATION INTERNATIONALE DE NORMALISATION**

**ISO/IEC JTC 1/SC 29/WG 3**

**CODING OF MOVING PICTURES AND AUDIO**

**ISO/IEC JTC 1/SC 29/WG 3 m** **55833**

**Online – October 2020**

**Title: Proposed new amendments for ISO/IEC 14496-22 AMD2**

**Authors: Peter Constable, Vladimir Levantovsky**

This contribution summarizes new updates for the Working Draft of ISO/IEC 14496-22:2019/AMD2 that were proposed as part of the discussions in the AHG on Font Format.

*6.4.1*

*Replace the Script tags table with the following:*

|  |  |
| --- | --- |
| **Script** | **Script Tag** |
| Adlam | 'adlm' |
| Ahom | 'ahom' |
| Anatolian Hieroglyphs | 'hluw' |
| Arabic | 'arab' |
| Armenian | 'armn' |
| Avestan | 'avst' |
| Balinese | 'bali' |
| Bamum | 'bamu' |
| Bassa Vah | 'bass' |
| Batak | 'batk' |
| Bengali | 'beng' |
| Bengali v.2 | 'bng2' |
| Bhaiksuki | 'bhks' |
| Bopomofo | 'bopo' |
| Brahmi | 'brah' |
| Braille | 'brai' |
| Buginese | 'bugi' |
| Buhid | 'buhd' |
| Byzantine Music | 'byzm' |
| Canadian Syllabics | 'cans' |
| Carian | 'cari' |
| Caucasian Albanian | 'aghb' |
| Chakma | 'cakm' |
| Cham | 'cham' |
| Cherokee | 'cher' |
| Chorasmian | 'chrs' |
| CJK Ideographic | 'hani' |
| Coptic | 'copt' |
| Cypriot Syllabary | 'cprt' |
| Cyrillic | 'cyrl' |
| Default | 'DFLT' |
| Deseret | 'dsrt' |
| Devanagari | 'deva' |
| Devanagari v.2 | 'dev2' |
| Dives Akuru | 'diak' |
| Dogra | 'dogr' |
| Duployan | 'dupl' |
| Egyptian hieroglyphs | 'egyp' |
| Elbasan | 'elba' |
| Elymaic | 'elym' |
| Ethiopic | 'ethi' |
| Georgian | 'geor' |
| Glagolitic | 'glag' |
| Gothic | 'goth' |
| Grantha | 'gran' |
| Greek | 'grek' |
| Gujarati | 'gujr' |
| Gujarati v.2 | 'gjr2' |
| Gunjala Gondi | 'gong' |
| Gurmukhi | 'guru' |
| Gurmukhi v.2 | 'gur2' |
| Hangul | 'hang' |
| Hangul Jamo | 'jamo' |
| Hanifi Rohingya | 'rohg' |
| Hanunoo | 'hano' |
| Hatran | 'hatr' |
| Hebrew | 'hebr' |
| Hiragana | 'kana' |
| Imperial Aramaic | 'armi' |
| Inscriptional Pahlavi | 'phli' |
| Inscriptional Parthian | 'prti' |
| Javanese | 'java' |
| Kaithi | 'kthi' |
| Kannada | 'knda' |
| Kannada v.2 | 'knd2' |
| Katakana | 'kana' |
| Kayah Li | 'kali' |
| Kharosthi | 'khar' |
| Khitan Small Script | 'kits' |
| Khmer | 'khmr' |
| Khojki | 'khoj' |
| Khudawadi | 'sind' |
| Lao | 'lao ' |
| Latin | 'latn' |
| Lepcha | 'lepc' |
| Limbu | 'limb' |
| Linear A | 'lina' |
| Linear B | 'linb' |
| Lisu (Fraser) | 'lisu' |
| Lycian | 'lyci' |
| Lydian | 'lydi' |
| Mahajani | 'mahj' |
| Makasar | 'maka' |
| Malayalam | 'mlym' |
| Malayalam v.2 | 'mlm2' |
| Mandaic, Mandaean | 'mand' |
| Manichaean | 'mani' |
| Masaram Gondi | 'gonm' |
| Marchen | 'marc' |
| Mathematical Alphanumeric Symbols | 'math' |
| Medefaidrin (Oberi Okaime, Oberi Ɔkaimɛ) | 'medf' |
| Meitei Mayek (Meithei, Meetei) | 'mtei' |
| Mende Kikakui | 'mend' |
| Meroitic Cursive | 'merc' |
| Meroitic Hieroglyphs | 'mero' |
| Miao | 'plrd' |
| Modi | 'modi' |
| Mongolian | 'mong' |
| Mro | 'mroo' |
| Multani | 'mult' |
| Musical Symbols | 'musc' |
| Myanmar | 'mymr' |
| Myanmar v.2 | 'mym2' |
| Nabataean | 'nbat' |
| Nandinagari | 'nand' |
| Newa | 'newa' |
| New Tai Lue | 'talu' |
| Nyiakeng Puachue Hmong | 'hmnp' |
| N'Ko | 'nko ' |
| Nüshu | 'nshu' |
| Odia (formerly Oriya) | 'orya' |
| Odia (formerly Oriya) v.2 | 'ory2' |
| Ogham | 'ogam' |
| Ol Chiki | 'olck' |
| Old Italic | 'ital' |
| Old Hungarian | 'hung' |
| Old North Arabian | 'narb' |
| Old Permic | 'perm' |
| Old Persian Cuneiform | 'xpeo' |
| Old Sogdian | 'sogo' |
| Old South Arabian | 'sarb' |
| Old Turkic, Orkhon Runic | 'orkh' |
| Osage | 'osge' |
| Osmanya | 'osma' |
| Pahawh Hmong | 'hmng' |
| Palmyrene | 'palm' |
| Pau Cin Hau | 'pauc' |
| Phags-pa | 'phag' |
| Phoenician | 'phnx' |
| Psalter Pahlavi | 'phlp' |
| Rejang | 'rjng' |
| Runic | 'runr' |
| Samaritan | 'samr' |
| Saurashtra | 'saur' |
| Sharada | 'shrd' |
| Shavian | 'shaw' |
| Siddham | 'sidd' |
| Sign Writing | 'sgnw' |
| Sinhala | 'sinh' |
| Sogdian | 'sogd' |
| Sora Sompeng | 'sora' |
| Soyombo | 'soyo' |
| Sumero-Akkadian Cuneiform | 'xsux' |
| Sundanese | 'sund' |
| Syloti Nagri | 'sylo' |
| Syriac | 'syrc' |
| Tagalog | 'tglg' |
| Tagbanwa | 'tagb' |
| Tai Le | 'tale' |
| Tai Tham (Lanna) | 'lana' |
| Tai Viet | 'tavt' |
| Takri | 'takr' |
| Tamil | 'taml' |
| Tamil v.2 | 'tml2' |
| Tangut | 'tang' |
| Telugu | 'telu' |
| Telugu v.2 | 'tel2' |
| Thaana | 'thaa' |
| Thai | 'thai' |
| Tibetan | 'tibt' |
| Tifinagh | 'tfng' |
| Tirhuta | 'tirh' |
| Ugaritic Cuneiform | 'ugar' |
| Vai | 'vai ' |
| Wancho | 'wcho' |
| Warang Citi | 'wara' |
| Yezidi | 'yezi' |
| Yi | 'yi ' |
| Zanabazar Square (Zanabazarin Dörböljin Useg, Xewtee Dörböljin Bicig, Horizontal Square Script) | 'zanb' |

*6.4.2*

*Replace the Language systems and tags table with the following:*

|  |  |  |
| --- | --- | --- |
| Language System | Language System Tag | Corresponding ISO 639 ID (if applicable) |
| Abaza | 'ABA ' | abq |
| Abkhazian | 'ABK ' | abk |
| Acholi | 'ACH ' | ach |
| Achi | 'ACR ' | acr |
| Adyghe | 'ADY ' | ady |
| Afrikaans | 'AFK ' | afr |
| Afar | 'AFR ' | aar |
| Agaw | 'AGW ' | ahg |
| Aiton | 'AIO ' | aio |
| Akan | 'AKA ' | aka, fat, twi |
| Batak Angkola | 'AKB ' | akb |
| Alsatian | 'ALS ' | gsw |
| Altai | 'ALT ' | atv, alt |
| Amharic | 'AMH ' | amh |
| Anglo-Saxon | 'ANG ' | ang |
| Phonetic transcription—Americanist conventions | APPH |  |
| Arabic | 'ARA ' | ara |
| Aragonese | 'ARG ' | arg |
| Aari | 'ARI ' | aiw |
| Rakhine | 'ARK ' | mhv, rmz, rki |
| Assamese | 'ASM ' | asm |
| Asturian | 'AST ' | ast |
| Athapaskan languages | 'ATH ' | aht, apa, apk, apj, apl, apm, apw, ath, bea, sek, bcr, caf, chp, clc, coq, crx, ctc, den, dgr, gce, gwi, haa, hoi, hup, ing, kkz, koy, ktw, kuu, mvb, nav, qwt, scs, srs, taa, tau, tcb, tce, tfn, tgx, tht, tol, ttm, tuu, txc, wlk, xup, xsl |
| Avar | 'AVR ' | ava |
| Awadhi | 'AWA ' | awa |
| Aymara | 'AYM ' | aym |
| Torki | 'AZB ' | azb |
| Azerbaijani | 'AZE ' | aze |
| Badaga | 'BAD ' | bfq |
| Banda | BAD0 | bad, bbp, bfl, bjo, bpd, bqk, gox, kuw, liy, lna, lnl, mnh, nue, nuu, tor, yaj, zmz |
| Baghelkhandi | 'BAG ' | bfy |
| Balkar | 'BAL ' | krc |
| Balinese | 'BAN ' | ban |
| Bavarian | 'BAR ' | bar |
| Baulé | 'BAU ' | bci |
| Batak Toba | 'BBC ' | bbc |
| Berber | 'BBR ' | auj, ber, cnu, gha, gho, grr, jbe, jbn, kab, mzb, oua, rif, sds, shi, shy, siz, sjs, swn, taq, tez, thv, thz, tia, tjo, tmh, ttq, tzm, zen, zgh |
| Bench | 'BCH ' | bcq |
| Bible Cree | 'BCR ' |  |
| Bandjalang | 'BDY ' | bdy |
| Belarussian | 'BEL ' | bel |
| Bemba | 'BEM ' | bem |
| Bengali | 'BEN ' | ben |
| Haryanvi | 'BGC ' | bgc |
| Bagri | 'BGQ ' | bgq |
| Bulgarian | 'BGR ' | bul |
| Bhili | 'BHI ' | bhi, bhb |
| Bhojpuri | 'BHO ' | bho |
| Bikol | 'BIK ' | bik, bhk, bcl, bto, cts, bln, fbl, lbl, rbl, ubl |
| Bilen | 'BIL ' | byn |
| Bislama | 'BIS ' | bis |
| Kanauji | 'BJJ ' | bjj |
| Blackfoot | 'BKF ' | bla |
| Baluchi | 'BLI ' | bal |
| Pa’o Karen | 'BLK ' | blk |
| Balante | 'BLN ' | bjt, ble |
| Balti | 'BLT ' | bft |
| Bambara (Bamanankan) | 'BMB ' | bam |
| Bamileke | 'BML ' | bai, bbj, bko, byv, fmp, jgo, nla, nnh, nnz, nwe, xmg, ybb |
| Bosnian | 'BOS ' | bos |
| Bishnupriya Manipuri | 'BPY ' | bpy |
| Breton | 'BRE ' | bre |
| Brahui | 'BRH ' | brh |
| Braj Bhasha | 'BRI ' | bra |
| Burmese | 'BRM ' | mya |
| Bodo | 'BRX ' | brx |
| Bashkir | 'BSH ' | bak |
| Burushaski | 'BSK ' | bsk |
| Batak Dairi (Pakpak) | 'BTD ' | btd |
| Beti | 'BTI ' | btb, beb, bum, bxp, eto, ewo, mct |
| Batak languages | 'BTK ' | akb, bbc, btd, btk, btm, bts, btx, btz |
| Batak Mandailing | 'BTM ' | btm |
| Batak Simalungun | 'BTS ' | bts |
| Batak Karo | 'BTX ' | btx |
| Batak Alas-Kluet | 'BTZ ' | btz |
| Bugis | 'BUG ' | bug |
| Medumba | 'BYV ' | byv |
| Kaqchikel | 'CAK ' | cak |
| Catalan | 'CAT ' | cat |
| Zamboanga Chavacano | 'CBK ' | cbk |
| Chinantec | CCHN | cco, chj, chq, chz, cle, cnl, cnt, cpa, csa, cso, cte, ctl, cuc, cvn |
| Cebuano | 'CEB ' | ceb |
| Chiga | 'CGG ' | cgg |
| Chamorro | 'CHA ' | cha |
| Chechen | 'CHE ' | che |
| Chaha Gurage | 'CHG ' | sgw |
| Chattisgarhi | 'CHH ' | hne |
| Chichewa (Chewa, Nyanja) | 'CHI ' | nya |
| Chukchi | 'CHK ' | ckt |
| Chuukese | CHK0 | chk |
| Choctaw | 'CHO ' | cho |
| Chipewyan | 'CHP ' | chp |
| Cherokee | 'CHR ' | chr |
| Chuvash | 'CHU ' | chv |
| Cheyenne | 'CHY ' | chy |
| Western Cham | 'CJA ' | cja |
| Eastern Cham | 'CJM ' | cjm |
| Comorian | 'CMR ' | swb, wlc, wni, zdj |
| Coptic | 'COP ' | cop |
| Cornish | 'COR ' | cor |
| Corsican | 'COS ' | cos |
| Creoles | 'CPP ' | abs, acf, afs, aig, aoa, bah, bew, bis, bjs, bpl, bpq, brc, bxo, bzj, bzk, cbk, ccl, ccm, chn, cks, cpe, cpf, cpi, cpp, cri, crp, crs, dcr, dep, djk, fab, fng, fpe, gac, gcf, gcl, gcr, gib, goq, gpe, gul, gyn, hat, hca, hmo, hwc, icr, idb, ihb, jam, jvd, kcn, kea, kmv, kri, kww, lir, lou, lrt, max, mbf, mcm, mfe, mfp, mkn, mod, msi, mud, mzs, nag, nef, ngm, njt, onx, oor, pap, pcm, pea, pey, pga, pih, pis, pln, pml, pmy, pov, pre, rcf, rop, scf, sci, skw, srm, srn, sta, svc, tas, tch, tcs, tgh, tmg, tpi, trf, tvy, uln, vic, vkp, wes, xmm |
| Cree | 'CRE ' | cre |
| Carrier | 'CRR ' | crx, caf |
| Crimean Tatar | 'CRT ' | crh |
| Kashubian | 'CSB ' | csb |
| Church Slavonic | 'CSL ' | chu |
| Czech | 'CSY ' | ces |
| Chittagonian | 'CTG ' | ctg |
| San Blas Kuna | 'CUK ' | cuk |
| Danish | 'DAN ' | dan |
| Dargwa | 'DAR ' | dar |
| Dayi | 'DAX ' | dax |
| Woods Cree | 'DCR ' | cwd |
| German | 'DEU ' | deu |
| Dogri (individual language) | 'DGO ' | dgo |
| Dogri (macrolanguage) | 'DGR ' | doi |
| Dhangu | 'DHG ' | dhg |
| Divehi (Dhivehi, Maldivian) | 'DHV ' (deprecated) | div |
| Dimli | 'DIQ ' | diq |
| Divehi (Dhivehi, Maldivian) | 'DIV ' | div |
| Zarma | 'DJR ' | dje |
| Djambarrpuyngu | DJR0 | djr |
| Dangme | 'DNG ' | ada |
| Dan | 'DNJ ' | dnj |
| Dinka | 'DNK ' | din |
| Dari | 'DRI ' | prs |
| Dhuwal | 'DUJ ' | duj, dwu, dwy |
| Dungan | 'DUN ' | dng |
| Dzongkha | 'DZN ' | dzo |
| Ebira | 'EBI ' | igb |
| Eastern Cree | 'ECR ' | crj, crl |
| Edo | 'EDO ' | bin |
| Efik | 'EFI ' | efi |
| Greek | 'ELL ' | ell |
| Eastern Maninkakan | 'EMK ' | emk |
| English | 'ENG ' | eng |
| Erzya | 'ERZ ' | myv |
| Spanish | 'ESP ' | spa |
| Central Yupik | 'ESU ' | esu |
| Estonian | 'ETI ' | est |
| Basque | 'EUQ ' | eus |
| Evenki | 'EVK ' | evn |
| Even | 'EVN ' | eve |
| Ewe | 'EWE ' | ewe |
| French Antillean | 'FAN ' | acf |
| Fang | FAN0 | fan |
| Persian | 'FAR ' | fas |
| Fanti | 'FAT ' | fat |
| Finnish | 'FIN ' | fin |
| Fijian | 'FJI ' | fij |
| Dutch (Flemish) | 'FLE ' | vls |
| Fe’fe’ | 'FMP ' | fmp |
| Forest Enets | 'FNE ' | enf |
| Fon | 'FON ' | fon |
| Faroese | 'FOS ' | fao |
| French | 'FRA ' | fra |
| Cajun French | 'FRC ' | frc |
| Frisian | 'FRI ' | fry |
| Friulian | 'FRL ' | fur |
| Arpitan | 'FRP ' | frp |
| Futa | 'FTA ' | fuf |
| Fulah | 'FUL ' | ful |
| Nigerian Fulfulde | 'FUV ' | fuv |
| Ga | 'GAD ' | gaa |
| Scottish Gaelic (Gaelic) | 'GAE ' | gla |
| Gagauz | 'GAG ' | gag |
| Galician | 'GAL ' | glg |
| Garshuni | 'GAR ' |  |
| Garhwali | 'GAW ' | gbm |
| Geez | 'GEZ ' | gez |
| Githabul | 'GIH ' | gih |
| Gilyak | 'GIL ' | niv |
| Kiribati (Gilbertese) | GIL0 | gil |
| Kpelle (Guinea) | 'GKP ' | gkp |
| Gilaki | 'GLK ' | glk |
| Gumuz | 'GMZ ' | guk |
| Gumatj | 'GNN ' | gnn |
| Gogo | 'GOG ' | gog |
| Gondi | 'GON ' | gon |
| Greenlandic | 'GRN ' | kal |
| Garo | 'GRO ' | grt |
| Guarani | 'GUA ' | grn |
| Wayuu | 'GUC ' | guc |
| Gupapuyngu | 'GUF ' | guf |
| Gujarati | 'GUJ ' | guj |
| Gusii | 'GUZ ' | guz |
| Haitian (Haitian Creole) | 'HAI ' | hat |
| Halam (Falam Chin) | 'HAL ' | cfm |
| Harauti | 'HAR ' | hoj |
| Hausa | 'HAU ' | hau |
| Hawaiian | 'HAW ' | haw |
| Haya | 'HAY ' | hay |
| Hazaragi | 'HAZ ' | haz |
| Hammer-Banna | 'HBN ' | amf |
| Herero | 'HER ' | her |
| Hiligaynon | 'HIL ' | hil |
| Hindi | 'HIN ' | hin |
| High Mari | 'HMA ' | mrj |
| Hmong | 'HMN ' | hmn |
| Hiri Motu | 'HMO ' | hmo |
| Hindko | 'HND ' | hno, hnd |
| Ho | 'HO ' | hoc |
| Harari | 'HRI ' | har |
| Croatian | 'HRV ' | hrv |
| Hungarian | 'HUN ' | hun |
| Armenian | 'HYE ' | hye, hyw |
| Armenian East | HYE0 | hye |
| Iban | 'IBA ' | iba |
| Ibibio | 'IBB ' | ibb |
| Igbo | 'IBO ' | ibo |
| Ido | 'IDO ' | ido |
| Ijo languages | 'IJO ' | iby, ijc, ije, ijn, ijo, ijs, nkx, okd, okr, orr |
| Interlingue | 'ILE ' | ile |
| Ilokano | 'ILO ' | ilo |
| Interlingua | 'INA ' | ina |
| Indonesian | 'IND ' | ind |
| Ingush | 'ING ' | inh |
| Inuktitut | 'INU ' | iku |
| Inupiat | 'IPK ' | ipk |
| Phonetic transcription—IPA conventions | IPPH |  |
| Irish | 'IRI ' | gle |
| Irish Traditional | 'IRT ' | gle |
| Icelandic | 'ISL ' | isl |
| Inari Sami | 'ISM ' | smn |
| Italian | 'ITA ' | ita |
| Hebrew | 'IWR ' | heb |
| Jamaican Creole | 'JAM ' | jam |
| Japanese | 'JAN ' | jpn |
| Javanese | 'JAV ' | jav |
| Lojban | 'JBO ' | jbo |
| Krymchak | 'JCT ' | jct |
| Yiddish | 'JII ' | yid |
| Ladino | 'JUD ' | lad |
| Jula | 'JUL ' | dyu |
| Kabardian | 'KAB ' | kbd |
| Kabyle | KAB0 | kab |
| Kachchi | 'KAC ' | kfr |
| Kalenjin | 'KAL ' | kln |
| Kannada | 'KAN ' | kan |
| Karachay | 'KAR ' | krc |
| Georgian | 'KAT ' | kat |
| Kazakh | 'KAZ ' | kaz |
| Makonde | 'KDE ' | kde |
| Kabuverdianu (Crioulo) | 'KEA ' | kea |
| Kebena | 'KEB ' | ktb |
| Kekchi | 'KEK ' | kek |
| Khutsuri Georgian | 'KGE ' | kat |
| Khakass | 'KHA ' | kjh |
| Khanty-Kazim | 'KHK ' | kca |
| Khmer | 'KHM ' | khm |
| Khanty-Shurishkar | 'KHS ' | kca |
| Khamti Shan | 'KHT ' | kht |
| Khanty-Vakhi | 'KHV ' | kca |
| Khowar | 'KHW ' | khw |
| Kikuyu (Gikuyu) | 'KIK ' | kik |
| Kirghiz (Kyrgyz) | 'KIR ' | kir |
| Kisii | 'KIS ' | kqs, kss |
| Kirmanjki | 'KIU ' | kiu |
| Southern Kiwai | 'KJD ' | kjd |
| Eastern Pwo Karen | 'KJP ' | kjp |
| Bumthangkha | 'KJZ ' | kjz |
| Kokni | 'KKN ' | kex |
| Kalmyk | 'KLM ' | xal |
| Kamba | 'KMB ' | kam |
| Kumaoni | 'KMN ' | kfy |
| Komo | 'KMO ' | kmw |
| Komso | 'KMS ' | kxc |
| Khorasani Turkic | 'KMZ ' | kmz |
| Kanuri | 'KNR ' | kau |
| Kodagu | 'KOD ' | kfa |
| Korean Old Hangul | 'KOH ' | kor, okm |
| Konkani | 'KOK ' | kok |
| Komi | 'KOM ' | kom |
| Kikongo | 'KON ' | ktu |
| Kongo | KON0 | kon |
| Komi-Permyak | 'KOP ' | koi |
| Korean | 'KOR ' | kor |
| Kosraean | 'KOS ' | kos |
| Komi-Zyrian | 'KOZ ' | kpv |
| Kpelle | 'KPL ' | kpe |
| Krio | 'KRI ' | kri |
| Karakalpak | 'KRK ' | kaa |
| Karelian | 'KRL ' | krl |
| Karaim | 'KRM ' | kdr |
| Karen | 'KRN ' | blk, bwe, eky, ghk, jkm, jkp, kar, kjp, kjt, ksw, kvl, kvq, kvt, kvu, kvy, kxf, kxk, kyu, pdu, pwo, pww, wea |
| Koorete | 'KRT ' | kqy |
| Kashmiri | 'KSH ' | kas |
| Ripuarian | KSH0 | ksh |
| Khasi | 'KSI ' | kha |
| Kildin Sami | 'KSM ' | sjd |
| S’gaw Karen | 'KSW ' | ksw |
| Kuanyama | 'KUA ' | kua |
| Kui | 'KUI ' | kxu |
| Kulvi | 'KUL ' | kfx |
| Kumyk | 'KUM ' | kum |
| Kurdish | 'KUR ' | kur |
| Kurukh | 'KUU ' | kru |
| Kuy | 'KUY ' | kdt |
| Koryak | 'KYK ' | kpy |
| Western Kayah | 'KYU ' | kyu |
| Ladin | 'LAD ' | lld |
| Lahuli | 'LAH ' | bfu |
| Lak | 'LAK ' | lbe |
| Lambani | 'LAM ' | lmn |
| Lao | 'LAO ' | lao |
| Latin | 'LAT ' | lat |
| Laz | 'LAZ ' | lzz |
| L-Cree | 'LCR ' | crm |
| Ladakhi | 'LDK ' | lbj |
| Lezgi | 'LEZ ' | lez |
| Ligurian | 'LIJ ' | lij |
| Limburgish | 'LIM ' | lim |
| Lingala | 'LIN ' | lin |
| Lisu | 'LIS ' | lis |
| Lampung | 'LJP ' | ljp |
| Laki | 'LKI ' | lki |
| Low Mari | 'LMA ' | mhr |
| Limbu | 'LMB ' | lif |
| Lombard | 'LMO ' | lmo |
| Lomwe | 'LMW ' | ngl |
| Loma | 'LOM ' | lom |
| Luri | 'LRC ' | lrc, luz, bqi, zum |
| Lower Sorbian | 'LSB ' | dsb |
| Lule Sami | 'LSM ' | smj |
| Lithuanian | 'LTH ' | lit |
| Luxembourgish | 'LTZ ' | ltz |
| Luba-Lulua | 'LUA ' | lua |
| Luba-Katanga | 'LUB ' | lub |
| Ganda | 'LUG ' | lug |
| Luyia | 'LUH ' | luy |
| Luo | 'LUO ' | luo |
| Latvian | 'LVI ' | lav |
| Madura | 'MAD ' | mad |
| Magahi | 'MAG ' | mag |
| Marshallese | 'MAH ' | mah |
| Majang | 'MAJ ' | mpe |
| Makhuwa | 'MAK ' | vmw |
| Malayalam | 'MAL ' | mal |
| Mam | 'MAM ' | mam |
| Mansi | 'MAN ' | mns |
| Mapudungun | 'MAP ' | arn |
| Marathi | 'MAR ' | mar |
| Marwari | 'MAW ' | mwr, dhd, rwr, mve, wry, mtr, swv |
| Mbundu | 'MBN ' | kmb |
| Mbo | 'MBO ' | mbo |
| Manchu | 'MCH ' | mnc |
| Moose Cree | 'MCR ' | crm |
| Mende | 'MDE ' | men |
| Mandar | 'MDR ' | mdr |
| Me’en | 'MEN ' | mym |
| Meru | 'MER ' | mer |
| Pattani Malay | 'MFA ' | mfa |
| Morisyen | 'MFE ' | mfe |
| Minangkabau | 'MIN ' | min |
| Mizo | 'MIZ ' | lus |
| Macedonian | 'MKD ' | mkd |
| Makasar | 'MKR ' | mak |
| Kituba | 'MKW ' | mkw |
| Male | 'MLE ' | mdy |
| Malagasy | 'MLG ' | mlg |
| Malinke | 'MLN ' | mlq |
| Malayalam Reformed | 'MLR ' | mal |
| Malay | 'MLY ' | msa |
| Mandinka | 'MND ' | mnk |
| Mongolian | 'MNG ' | mon |
| Manipuri | 'MNI ' | mni |
| Maninka | 'MNK ' | man, mnk, myq, mku, msc, emk, mwk, mlq |
| Manx | 'MNX ' | glv |
| Mohawk | 'MOH ' | moh |
| Moksha | 'MOK ' | mdf |
| Moldavian | 'MOL ' | mol |
| Mon | 'MON ' | mnw |
| Moroccan | 'MOR ' |  |
| Mossi | 'MOS ' | mos |
| Maori | 'MRI ' | mri |
| Maithili | 'MTH ' | mai |
| Maltese | 'MTS ' | mlt |
| Mundari | 'MUN ' | unr |
| Muscogee | 'MUS ' | mus |
| Mirandese | 'MWL ' | mwl |
| Hmong Daw | 'MWW ' | mww |
| Mayan | 'MYN ' | acr, agu, caa, cac, cak, chf, ckz, cob, ctu, emy, hus, itz, ixl, jac, kek, kjb, knj, lac, mam, mhc, mop, myn, poc, poh, quc, qum, quv, toj, ttc, tzh, tzj, tzo, usp, yua |
| Mazanderani | 'MZN ' | mzn |
| Naga-Assamese | 'NAG ' | nag |
| Nahuatl | 'NAH ' | azd, azn, azz, nah, naz, nch, nci, ncj, ncl, ncx, ngu, nhc, nhe, nhg, nhi, nhk, nhm, nhn, nhp, nhq, nht, nhv, nhw, nhx, nhy, nhz, nlv, npl, nsu, nuz |
| Nanai | 'NAN ' | gld |
| Neapolitan | 'NAP ' | nap |
| Naskapi | 'NAS ' | nsk |
| Nauruan | 'NAU ' | nau |
| Navajo | 'NAV ' | nav |
| N-Cree | 'NCR ' | csw |
| Ndebele | 'NDB ' | nbl, nde |
| Ndau | 'NDC ' | ndc |
| Ndonga | 'NDG ' | ndo |
| Low Saxon | 'NDS ' | nds |
| Nepali | 'NEP ' | nep |
| Newari | 'NEW ' | new |
| Ngbaka | 'NGA ' | nga |
| Nagari | 'NGR ' |  |
| Norway House Cree | 'NHC ' | csw |
| Nisi | 'NIS ' | dap, njz, tgj |
| Niuean | 'NIU ' | niu |
| Nyankole | 'NKL ' | nyn |
| N’Ko | 'NKO ' | nqo |
| Dutch | 'NLD ' | nld |
| Nimadi | 'NOE ' | noe |
| Nogai | 'NOG ' | nog |
| Norwegian | 'NOR ' | nob |
| Novial | 'NOV ' | nov |
| Northern Sami | 'NSM ' | sme |
| Northern Sotho | 'NSO ' | nso |
| Northern Tai | 'NTA ' | nod |
| Esperanto | 'NTO ' | epo |
| Nyamwezi | 'NYM ' | nym |
| Norwegian Nynorsk (Nynorsk, Norwegian) | 'NYN ' | nno |
| Mbembe Tigon | 'NZA ' | nza |
| Occitan | 'OCI ' | oci |
| Oji-Cree | 'OCR ' | ojs |
| Ojibway | 'OJB ' | oji |
| Odia (formerly Oriya) | 'ORI ' | ori |
| Oromo | 'ORO ' | orm |
| Ossetian | 'OSS ' | oss |
| Palestinian Aramaic | 'PAA ' | sam |
| Pangasinan | 'PAG ' | pag |
| Pali | 'PAL ' | pli |
| Pampangan | 'PAM ' | pam |
| Punjabi | 'PAN ' | pan |
| Palpa | 'PAP ' | plp |
| Papiamentu | PAP0 | pap |
| Pashto | 'PAS ' | pus |
| Palauan | 'PAU ' | pau |
| Bouyei | 'PCC ' | pcc |
| Picard | 'PCD ' | pcd |
| Pennsylvania German | 'PDC ' | pdc |
| Polytonic Greek | 'PGR ' | ell |
| Phake | 'PHK ' | phk |
| Norfolk | 'PIH ' | pih |
| Filipino | 'PIL ' | fil |
| Palaung | 'PLG ' | pce, rbb, pll |
| Polish | 'PLK ' | pol |
| Piemontese | 'PMS ' | pms |
| Western Panjabi | 'PNB ' | pnb |
| Pocomchi | 'POH ' | poh |
| Pohnpeian | 'PON ' | pon |
| Provençal / Old Provençal | 'PRO ' | pro |
| Portuguese | 'PTG ' | por |
| Western Pwo Karen | 'PWO ' | pwo |
| Chin | 'QIN ' | bgr, biu, cek, cey, cfm, cbl, cka, ckn, clj, clt, cmr, cnb, cnh, cnk, cnw, csh, csj, csv, csy, ctd, cth, czt, dao, gnb, hlt, hmr, hra, lus, mrh, mwq, pck, pkh, pub, ral, rtc, sch, sez, shl, smt, tcp, tcz, vap, weu, zom, zyp |
| K’iche’ | 'QUC ' | quc |
| Quechua (Bolivia) | 'QUH ' | quh |
| Quechua | 'QUZ ' | quz |
| Quechua (Ecuador) | 'QVI ' | qvi |
| Quechua (Peru) | 'QWH ' | qwh |
| Rajasthani | 'RAJ ' | raj |
| Rarotongan | 'RAR ' | rar |
| Russian Buriat | 'RBU ' | bxr |
| R-Cree | 'RCR ' | atj |
| Rejang | 'REJ ' | rej |
| Riang | 'RIA ' | ria |
| Tarifit | 'RIF ' | rif |
| Ritarungo | 'RIT ' | rit |
| Arakwal | 'RKW ' | rkw |
| Romansh | 'RMS ' | roh |
| Vlax Romani | 'RMY ' | rmy |
| Romanian | 'ROM ' | ron |
| Romany | 'ROY ' | rom |
| Rusyn | 'RSY ' | rue |
| Rotuman | 'RTM ' | rtm |
| Kinyarwanda | 'RUA ' | kin |
| Rundi | 'RUN ' | run |
| Aromanian | 'RUP ' | rup |
| Russian | 'RUS ' | rus |
| Sadri | 'SAD ' | sck |
| Sanskrit | 'SAN ' | san |
| Sasak | 'SAS ' | sas |
| Santali | 'SAT ' | sat |
| Sayisi | 'SAY ' | chp |
| Sicilian | 'SCN ' | scn |
| Scots | 'SCO ' | sco |
| North Slavey | 'SCS ' | scs |
| Sekota | 'SEK ' | xan |
| Selkup | 'SEL ' | sel |
| Old Irish | 'SGA ' | sga |
| Sango | 'SGO ' | sag |
| Samogitian | 'SGS ' | sgs |
| Tachelhit | 'SHI ' | shi |
| Shan | 'SHN ' | shn |
| Sibe | 'SIB ' | sjo |
| Sidamo | 'SID ' | sid |
| Silte Gurage | 'SIG ' | xst, stv, wle |
| Skolt Sami | 'SKS ' | sms |
| Slovak | 'SKY ' | slk |
| Slavey | 'SLA ' | den, scs, xsl |
| Slovenian | 'SLV ' | slv |
| Somali | 'SML ' | som |
| Samoan | 'SMO ' | smo |
| Sena | 'SNA ' | seh |
| Shona | SNA0 | sna |
| Sindhi | 'SND ' | snd |
| Sinhala (Sinhalese) | 'SNH ' | sin |
| Soninke | 'SNK ' | snk |
| Sodo Gurage | 'SOG ' | gru |
| Songe | 'SOP ' | sop |
| Southern Sotho | 'SOT ' | sot |
| Albanian | 'SQI ' | sqi |
| Serbian | 'SRB ' | cnr, srp |
| Sardinian | 'SRD ' | srd |
| Saraiki | 'SRK ' | skr |
| Serer | 'SRR ' | srr |
| South Slavey | 'SSL ' | xsl |
| Southern Sami | 'SSM ' | sma |
| Saterland Frisian | 'STQ ' | stq |
| Sukuma | 'SUK ' | suk |
| Sundanese | 'SUN ' | sun |
| Suri | 'SUR ' | suq |
| Svan | 'SVA ' | sva |
| Swedish | 'SVE ' | swe |
| Swadaya Aramaic | 'SWA ' | aii |
| Swahili | 'SWK ' | swa |
| Swati | 'SWZ ' | ssw |
| Sutu | 'SXT ' | ngo |
| Upper Saxon | 'SXU ' | sxu |
| Sylheti | 'SYL ' | syl |
| Syriac | 'SYR ' | aii, amw, cld, syc, syr, tru |
| Syriac, Estrangela script-variant (equivalent to ISO 15924 'Syre') | SYRE | syc, syr |
| Syriac, Western script-variant (equivalent to ISO 15924 'Syrj') | SYRJ | syc, syr |
| Syriac, Eastern script-variant (equivalent to ISO 15924 'Syrn') | SYRN | syc, syr |
| Silesian | 'SZL ' | szl |
| Tabasaran | 'TAB ' | tab |
| Tajiki | 'TAJ ' | tgk |
| Tamil | 'TAM ' | tam |
| Tatar | 'TAT ' | tat |
| TH-Cree | 'TCR ' | cwd |
| Dehong Dai | 'TDD ' | tdd |
| Telugu | 'TEL ' | tel |
| Tetum | 'TET ' | tet |
| Tagalog | 'TGL ' | tgl |
| Tongan | 'TGN ' | ton |
| Tigre | 'TGR ' | tig |
| Tigrinya | 'TGY ' | tir |
| Thai | 'THA ' | tha |
| Tahitian | 'THT ' | tah |
| Tibetan | 'TIB ' | bod |
| Tiv | 'TIV ' | tiv |
| Turkmen | 'TKM ' | tuk |
| Tamashek | 'TMH ' | taq, thv, thz, tmh, ttq |
| Temne | 'TMN ' | tem |
| Tswana | 'TNA ' | tsn |
| Tundra Enets | 'TNE ' | enh |
| Tonga | 'TNG ' | toi |
| Todo | 'TOD ' | xal |
| Toma | TOD0 | tod |
| Tok Pisin | 'TPI ' | tpi |
| Turkish | 'TRK ' | tur |
| Tsonga | 'TSG ' | tso |
| Tshangla | 'TSJ ' | tsj |
| Turoyo Aramaic | 'TUA ' | tru |
| Tumbuka | 'TUL ' | tcy |
| Tulu | 'TUM ' | tum |
| Tuvin | 'TUV ' | tyv |
| Tuvalu | 'TVL ' | tvl |
| Twi | 'TWI ' | twi |
| Tày | 'TYZ ' | tyz |
| Tamazight | 'TZM ' | tzm |
| Tzotzil | 'TZO ' | tzo |
| Udmurt | 'UDM ' | udm |
| Ukrainian | 'UKR ' | ukr |
| Umbundu | 'UMB ' | umb |
| Urdu | 'URD ' | urd |
| Upper Sorbian | 'USB ' | hsb |
| Uyghur | 'UYG ' | uig |
| Uzbek | 'UZB ' | uzb |
| Venetian | 'VEC ' | vec |
| Venda | 'VEN ' | ven |
| Vietnamese | 'VIT ' | vie |
| Volapük | 'VOL ' | vol |
| Võro | 'VRO ' | vro |
| Wa | 'WA ' | wbm |
| Wagdi | 'WAG ' | wbr |
| Waray-Waray | 'WAR ' | war |
| West-Cree | 'WCR ' | crk |
| Welsh | 'WEL ' | cym |
| Wolof | 'WLF ' | wol |
| Walloon | 'WLN ' | wln |
| Mewati | 'WTM ' | wtm |
| Lü | 'XBD ' | khb |
| Xhosa | 'XHS ' | xho |
| Minjangbal | 'XJB ' | xjb |
| Khengkha | 'XKF ' | xkf |
| Soga | 'XOG ' | xog |
| Kpelle (Liberia) | 'XPE ' | xpe |
| Sakha | 'YAK ' | sah |
| Yao | 'YAO ' | yao |
| Yapese | 'YAP ' | yap |
| Yoruba | 'YBA ' | yor |
| Y-Cree | 'YCR ' | crj, crk, crl |
| Yi Classic | 'YIC ' |  |
| Yi Modern | 'YIM ' | iii |
| Zealandic | 'ZEA ' | zea |
| Standard Moroccan Tamazight | 'ZGH ' | zgh |
| Zhuang | 'ZHA ' | zha |
| Chinese, Traditional, Hong Kong SAR | 'ZHH ' | zho |
| Chinese, Phonetic | 'ZHP ' | zho |
| Chinese, Simplified | 'ZHS ' | zho |
| Chinese, Traditional | 'ZHT ' | zho |
| Chinese, Traditional, Macao SAR | 'ZHTM' | zho |
| Zande | 'ZND ' | zne |
| Zulu | 'ZUL ' | zul |
| Zazaki | 'ZZA ' | zza |

*7.2.4.2*

*Replace the “Optical size” tag description with the following:*

**Tag:** 'opsz'

*Name:* Optical size

*Description:* Used to vary design to suit different text sizes.

*Valid numeric range:* Values must be strictly greater than zero.

*Scale interpretation:* Values can be interpreted as text size, in typographic points, as defined in the OpenType specification: a physical unit equal to 1/72 of a standard physical inch.

*Recommended or required “Regular” value:* A value in the range 10 to 16 is recommended for typical text settings.

*Suggested programmatic interactions:* Applications may choose to select an optical-size variant automatically based on the displayed text size.

*Additional information:*

The Optical size axis can be used as a variation axis within a variable font. It can also be used within a 'STAT' table in non-variable fonts within a family that has optical-size variants to provide a complete characterization of a font in relation to its family within the 'STAT' table. In the 'STAT' table of a non-variable font, a format 2 axis value table is recommended to characterize the range of text sizes for which the optical-size variant is intended.

Typical font implementation of optical size design variants involves adapting glyph proportions, stem weights, and details to be appropriate to specific sizes of displayed text. These adaptations may be both functional and aesthetic, ensuring legibility at smaller sizes and refinement of fine details and overall width at larger sizes. The nature of the adaptations may depend on aspects of the individual typeface design, the characters or scripts involved, targeted devices on which the font may be displayed, and known or intended distance from which text will be viewed.

Type designers may develop size-specific design variations based on print or screen rendering, typically evaluating the design of these variations at a reading distance of 14 to 16 inches. This can be used as a basis for determining appropriate optical size variants for different distances. For example, if the design of a given optical size variant is appropriate for 12-point text viewed from a reading distance of 15 inches, it should also be appropriate for 24-point text viewed from a reading distance of 30 inches.

The scale for the Optical size axis is text size in points. For these purposes, the text size is as determined by the document or application for its intended use; the actual physical size on a display may be different due to platform or application scaling methods or intended viewing distance.

The target of size-specific design is optical; i.e., tailored to what the reader is seeing. For this reason, Optical size axis variant selection should be determined, so far as possible, by as much information as available regarding displayed size of text *as seen by the reader*. Factors to be taken into account should include the scaling of type on specific platforms and the translation of document and platform units to 1/72 of a physical inch, as well as typical reading distances for applications and devices. This may mean that a nominally specified text size in a document could result in a different Optical size axis variant selection on different platforms and devices, determined by the actual size of text seen by the reader.

NOTE User-perceived size is very dependent on viewing distance, not only physical size on the display. For example, when viewing text on a large-screen TV, the physical size on the display will be many times larger than the size perceived by the user. In this case, selecting an Optical size variant based only on the physical size on the display would likely result in reduced legibility for the user.

When translating between document units and the point (1/72 inch) scale for this axis, care should be taken not to assume equivalences between units that may apply on some platforms but not others.

In applications that automatically select an Optical size variant, this should normally be done based on the text size with a default or “100%” zoom level, not on a combination of text size and zoom level. Types of zoom that do not trigger re-layout of text should not change Optical size variant selection, while content enlarging or diminishing operations that change re-layout of text should make a new Optical size variant selection based on the new displayed sized.

If the size of displayed text is smaller or greater than the minimum and maximum extent of the axis range, Optical size axis variant selection should be clamped to the appropriate minimum or maximum axis value, not reset to the default instance.

It is recommended that software provide means to override automatic Optical size variant selection, as may be appropriate for particular platforms, intended use, known viewing distance, or accessibility.