EtherGuide Sincronizada

the dynamic, flexible, fully standards-compliant broadcast metadata generator

Sincronizada (Spanish) translation(s):
1. Synchronized
2. A hot ham-and-cheese quesadilla
3. A favorite midday meal of the system designer

In English or any other language:
Fully standards-compliant dynamic broadcast metadata generation with hardware redundancy and proven reliability

Program and System Information Protocol (PSIP) generation and emission

- **MPEG-2 Program Specific Information (PSI)**
- **SCTE-65 (Profiles 1-6)**
- **ATSC Non-Real-Time metadata**
- **Optional ATSC MDTV (M/H) Signaling**
- **Optional ATSC MDTV (M/H) Service Guide**
- Customizable by EtherGuide Systems for other forms of broadcast metadata

EtherGuide Sincronizada is a big, ugly, acoustically noisy broadcast metadata generator; petite, pretty, or acoustically quiet metadata generators employ compromises that negatively impact reliable, trouble-free operation

o One rack-unit high (1RU)-based units lack reliable power supplies or are not hot-pluggable like those in EtherGuide Sincronizada, lack RAID 1 hard drive arrays with drives that can be hot-swapped, and lack redundant internal cooling fans, **ALL of which** in EtherGuide Sincronizada can be replaced **while the unit continues to generate** dynamic broadcast metadata

o Pretty units artificially limit available cooling air in the service of brand vanity

o Quiet units are disposable; as their electronic components all run "hot" but do permit quiet conversations in front of an operating unit at the only time you can confer with the system designer: at trade shows

Sometimes it seems that vendors of hardware-based broadcast metadata generators seem to believe that broadcasters use the same criteria for selecting broadcast systems that the vendor's employees use for selecting office- or cubicle-mates, with small, good-looking, normally quiet but sometimes "funny" winning out.

EtherGuide Systems was founded by a broadcaster and broadcast engineer who knew from the outset that a mission-critical, on-air system such as a broadcast metadata required a combination of "bulletproof" purpose-built and tested software, plus broadcast-quality interface components and carrier-grade computer hardware. After 10 years of development, with more than 14,000 hours between on-air system faults at our initial customer's full service broadcast station, EtherGuide Sincronizada is ready and available to bring your station into full compliance with all applicable ATSC and MPEG-2 standards and FCC regulations based on those standards.

Beyond mere ATSC, SCTE and MPEG-2 compliance, EtherGuide Sincronizada permits, in a single unit, empowers broadcasters to exploit all the metadata functionalities offered in any commercial ATSC tuner or receiver. While few television sets display "extended channel names" and "channel descriptions" in the PSIP standard, EtherGuide Systems fully supports both, as some receivers process and display these strings. Since many receivers provide users the ability

to specify which available language or languages to display multilingual text strings, EtherGuide Systems fully supports this feature.

As some ATSC receivers provide for "v-chip" parental ratings in two regions (such as the United States + Canada), EtherGuide Sincronizada fully supports this feature. On the other hand, until EtherGuide Systems is informed of a single receiver that supports Directed Channel Change and updateable Directed Channel Change Selection Codes, EtherGuide Sincronizada will only offer this exotic feature as an optional feature.

Our unique combinations of high reliability, full standards compliance and full exploitation of PSIP functionality insures that stations using EtherGuide Sincronizada will have the largest viewing audiences available, as many over the air viewers own television sets that experience trouble when tuning into non-compliant broadcast metadata.

Unlike other broadcast metadata systems vendors, EtherGuide Systems will insist on personally installing EtherGuide Sincronizada at your station and validating the entire install to insure your existing systems provide all the dynamic information needed to attain and maintain ATSC compliance.

Call, Skype, write or email EtherGuide Systems today to start enjoying reliable, fully compliant broadcast metadata.

Basic/Standard Features

- Generates and emits all mandatory ATSC A/65 PSIP tables: System Time Table (STT), Master Guide Table (MGT), Terrestrial Virtual Channel Table (TVCT), Event Information Tables (EIT) 0-3, and all optional PSIP tables supported in receivers, including Channel Extended Text Tables (CETT) and Event Extended Text Tables (EETT), Event Information Tables 4-127), Cable Virtual Channel Table (CVCT), MPEG-2 Program Association Table (PAT) and Transport Stream Program Map Tables (PMT).
- Supports all broadcast (8-VSB/16-VSB) and cable (SCTE-1 and SCTE-2) modulation modes.
- Satellite full service, digital LPTV and TV translator stations that originate television programs can redirect incoming PSIP (via EtherGuide Sincronizada's DVB-ASI input) to rebranded virtual channels and insert local program information without the cost, expense and hassle of a traffic or automation system and without paying for a program data listing service.
- Users can configure generator to dynamically create **MPEG-2 Program Map Table (PMT)** sections and descriptors and and **Program Association Table (PAT)** to achieve full compliance with applicable ATSC and SCTE standards.
- Graphical User Interface permits easy reconfiguration and adjustments, even while unit is operating, and changes in are reflected in bit-stream output within 10 seconds
- The most bit-efficient broadcast metadata generator available due to full flexibility in Event Information Table (EIT) repetition rates and patterns and user-controlled automatic compression of text strings using the most efficient Huffman compression scheme for each string
- Full Multilingual support: audio, captioning, extended channel name and event titles and descriptions can be specified as being in any permissible ISO-639-2/b language value, even Klingon.
- Frame accurate timing and dynamic changes when interfaced to frame-accurate data sources
- Full support for Programming Metadata Communications Protocol (PMCP 3.1, also known ATSC A/76b) interface between EtherGuide Sincronizada and traffic, automation, program listing services and other PMCP-compliant data sources.
- Personally installed, configured and validated at your site (within the Continental United States) at no additional cost
- Automatically updates (via live Internet connection) GpsUtcOffset and Daylight Savings Time changes without any user involvement
- UDP/IP (Ethernet) and DVB-ASI live output connectivity included in every unit and configurable DVB-ASI input
- Supports Harris/Lucent NetVx/Flexicoder and Logic Innovations TSS/TSM-2800 output carouseling. (Other carouseling arrangements are available on an optional basis)
- SCTE-65 Profile 6 output can be configured to be transmitted isochronously with PSIP/PSI
- Tested to achieve the highest degree of standards compliance when used with TitanTv's MediaStar 3.0 program listing/data service system

- Supports U.S. and Canadian (multilingual) parental ratings systems (CEA-766B) and any other Rating Region Table promulgated by a national regulatory authority

Optional Features

- Multiple (independent or diplexed/duplexed) transport stream outputs
- Multiple transport stream Inputs
- ATSC M/H Signaling (ATSC A/153 Part 3)
- ATSC M/H Service Guide (ATSC A/153) for unencrypted and encrypted channels
- ATSC Rating Region Table (RRT) emission for any standardized or lawfully defined Rating Region Table
- "User Private" MPEG-2 Private Table sections
- Conditional Access Table(s)
- Tribune Media Services program listing service data ingest
- Syncopated Redundant Output with multiple EtherGuide Sincronizada units
- Directed Channel Change Tables/Directed Channel Change Selection Code Table support
- Conditional Access Tables
- Additional carouseling interfaces and custom output configurations
- User Private tables
- Additional EtherGuide Network Interfaces (NICs)
- What features would you like us to add to your system?

Standards compliance

- ATSC A/52B (Annex A) June 14, 2005
- ATSC A/53:2009 Part 3 and 4
- ATSC A/57 May 26, 2008
- ATSC A/65C (with Amendment 1) May 9, 2006
- ATSC A/76B January 14, 2008 (ACAP data set, not present in receivers, excepted)
- ISO/IEC IS 13818-1:2007
- ISO/IEC IS 13818-2:2004
- ISO/IEC 7064 First Edition (as required in ATSC A/76B)
- ISO 15706 First Edition
- SCTE-65: 2008

Data Source Interfaces

- ATSC A/76B
- Microsoft SQL Server / ADO.Net
- EtherGuide Systems will provide one additional data source interface at no additional cost for each customer
- MPEG-2 Transport Stream input via included DVB-ASI input and processing and metadata extraction and repurposing/redirection

Output

- Generator output is user-switchable between UDP/IP (Unicast or Multicast, as needed) and DVB-ASI. Other output configurations are available as customer-specified options

Hardware

- Units shipping are currently based on the Intel SR-2600UR 2RU Rack-mount server system
- Three year limited warranty on all hardware (component swap)
- 1.8 GHz (or faster) Duo-Core CPU insures unbound "foreground" and "background" system operations
- 3-Disk (500GB) RAID 1 array, with the third disk configured to automatically configure and build on failure of either of the other two disk drives
- 4 GB DDR-3 RAM
- Dual 10/100/1000 Network Interfaces (NICS)
- Rack rails and cable management arm enables hot-swapping of redundant cooling fans while unit continues to operate
- Intel System Management Software (remote secure access to system independent of operating system) including a dedicated NIC

Physical

Width (with rack rails) 17.7 inches/451.3 mm – Height 3.4 inches/87.3 mm – Depth (not including cable management arm) 27.75 inches/704.86 mm

Maximum weight 65 lbs. / 29.5 kg

Electrical

Power Requirements: Switchable 110-127 VAC (max 12A RMS) or 200-240 VAC (max 6A RMS) 50/60 Hz.

Environmental

- Operating Environment: 10-35 degrees Celsius, with change not to exceed 10 degrees Celsius per hour
- Non-Operating Environment: -40 to +70 degrees Celsius, maximum non-operating humidity 90%, non-condensing at 35 degrees Celsius.
- Maximum System Cooling Requirement: 2550 BTU/hr.
- Hardware complies with UL 60950 – CSA 60950
- Hardware FCC/ICES-003 Class A Attestation (USA/Canada)

Language support

Applicable ATSC standards require that audio streams, and most text strings are required to be identified by a three-letter ISO-639-2/B language code. This requirement insures that television sets, when presented with multiple audio streams in different languages or strings such as Electronic Program Guide entries in PSIP with multilingual entries, can present viewers with choices in their preferred language or languages.

EtherGuide Sincronizada supports the full spectrum of languages and language designations provided by ISO-639-2/B. Below is a full listing of ISO-639-2/B languages supported by EtherGuide Sincronizada. Please note that where there is more than one language or dialect listed in an entry, ISO-639-2/B does not offer the ability to discern between the entries. For example, for the purposes of signaling language, "Aromanian, Arumanian and Macedo-Romanian" are the same language.

Please also note that languages that cannot be fully rendered using ASCII or Latin-1 character sets require television sets that include Unicode font sets. In general, computer applications used to display broadcast content will have the required fonts, but television sets may or may not provide the same text rendering capabilities.

<No linguistic content; Not applicable>	Assamese	Bini; Edo	Chinook jargon
<Uncoded languages>	Asturian; Bable; Leonese; Asturleonese	Bislama	Chipewyan; Dene Suline
<undetermined>	Athapascan languages	Blin; Bilin	Choctaw
Abkhazian	Australian languages	Blissymbols; Blissymbolics; Bliss	Chuukese
Achinese	Austronesian languages	Bokmål, Norwegian; Norwegian Bokmål	Chuvash
Acoli	Avaric	Bosnian	Classical Newari; Old Newari; Classical
Adangme	Avestan	Braj	Nepal Bhasa
Adyghe; Adygei	Awadhi	Breton	Classical Syriac
Afar	Aymara	Buginese	Coptic
Afrihili	Azerbaijani	Bulgarian	Cornish
Afrikaans	Balinese	Buriat	Corsican
Afro-Asiatic languages	Baltic languages	Burmese	Cree
Ainu	Baluchi	Burmese	Creek
Akan	Bambara	Caddo	Creoles and pidgins
Albanian	Bamileke languages	Catalan; Valencian	Creoles and pidgins, English based
Albanian	Banda languages	Caucasian languages	Creoles and pidgins, French-based
Aleut	Bantu languages	Cebuano	Creoles and pidgins, Portuguese-based
Algonquian languages	Basa	Celtic languages	Crimean Tatar; Crimean Turkish
Altaic languages	Bashkir	Central American Indian languages	Croatian
Amharic	Basque	Central Khmer	Cushitic languages
Angika	Basque	Chagatai	Czech
Apache languages	Batak languages	Chamic languages	Czech
Arabic	Beja; Bedawiyet	Chamorro	Dakota
Aragonese	Belarusian	Chechen	Danish
Arapaho	Bemba	Cherokee	Dargwa
Arawak	Bengali	Cheyenne	Delaware
Armenian	Berber languages	Chibcha	Dinka
Armenian	Bhojpuri	Chichewa; Chewa; Nyanja	Divehi; Dhivehi; Maldivian
Aromanian; Arumanian; Macedo-Romanian	Bihari languages	Chinese	Dogri
Artificial languages	Bikol	Chinese	Dogrib

Dravidian languages
Duala
Dutch, Middle (ca.1050-1350)
Dutch; Flemish
Dutch; Flemish
Dyula
Dzongkha
Eastern Frisian
Efik
Ekajuk
Elamite
English
English, Middle (1100-1500)
English, Old (ca.450-1100)
Erzya
Esperanto
Estonian
Ewe
Ewondo
Fang
Fanti
Faroese
Fijian
Filipino; Pilipino
Finnish
Finno-Ugrian languages
Fon
French
French
French, Middle (ca.1400-1600)
French, Old (842-ca.1400
Friulian
Fulah
Ga
Gaelic; Scottish Gaelic
Galibi Carib
Galician
Ganda
Gayo
Gbaya
Geeze
Georgian
Georgian
German
German
German, Middle High (ca.1050-1500)
German, Old High (ca.750-1050)
Germanic languages
Gilbertese
Gondi
Gorontalo
Gothic
Grebo
Greek, Ancient (to 1453)
Greek, Modern (1453-)
Greek, Modern (1453-)
Guarani
Gujarati
Gwich'in
Haida
Haitian; Haitian Creole
Hausa
Hawaiian
Hebrew
Herero
Hiligaynon
Himachali languages; Western Pahari
    languages
Hindi
Hiri Motu
Hittite
Hmong; Mong
Hungarian
Hupa
Iban
Icelandic
Ido

Igbo
Ijo languages
Iloko
Inari Sami
Indic languages
Indo-European languages
Indonesian
Ingush
Interlingue; Occidental
Inuktitut
Inupiaq
Iranian languages
Irish
Irish, Middle (900-1200)
Irish, Old (to 900)
Iroquoian languages
Italian
Japanese
Javanese
Judeo-Arabic
Judeo-Persian
Kabardian
Kabyle
Kachin; Jingpho
Kalaallisut; Greenlandic
Kalmyk; Oirat
Kamba
Kannada
Kanuri
Karachay-Balkar
Kara-Kalpak
Karelian
Karen languages
Kashmiri
Kashubian
Kawi
Kazakh
Khasi
Khoisan languages
Khotanese; Sakan
Kikuyu; Gikuyu
Kimbundu
Kinyarwanda
Kirghiz; Kyrgyz
Klingon; tlhIngan-Hol
Komi
Kongo
Konkani
Korean
Kosraean
Kpelle
Kru languages
Kuanyama; Kwanyama
Kumyk
Kurdish
Kurukh
Kutenai
Ladino
Lahnda
Lamba
Land Dayak languages
Lao
Latin
Latvian
Lezghian
Limburgan; Limburger; Limburgish
Lingala
Lithuanian
Lojban
Low German; Low Saxon; German, Low;
    Saxon, Low
Lower Sorbian
Lozi
Luba-Katanga
Luba-Lulua
Luiseno
Lule Sami

Lunda
Luo (Kenya and Tanzania)
Lushai
Luxembourgish; Letzeburgesch
Macedonian
Macedonian
Madurese
Magahi
Maithili
Makasar
Malagasy
Malay
Malay
Malayalam
Maltese
Manchu
Mandar
Mandingo
Manipuri
Manobo languages
Manx
Maori
Maori
Mapudungun; Mapuche
Marathi
Mari
Marshallese
Marwari
Masai
Mayan languages
Mende
Mi'kmaq; Micmac
Minangkabau
Mirandese
Mohawk
Moksha
Mongo
Mongolian
Mon-Khmer languages
Mossi
Multiple languages
Munda languages
Nahuatl languages
Nauru
Navajo
Ndebele, North; North Ndebele
Ndebele, South; South Ndebele
Ndonga
Neapolitan
Nepal Bhasa; Newari
Nepali
Nias
Niger-Kordofanian languages
Nilo-Saharan languages
Niuean
N'Ko
Nogai
Norse, Old
North American Indian languages
Northern Frisian
Northern Sami
Norwegian
Norwegian Nynorsk; Nynorsk, Norwegian
Nubian languages
Nyamwezi
Nyankole
Nyoro
Nzima
Occitan (post 1500)
Official Aramaic (700-300 BCE); Imperial
    Aramaic (700-300 BCE)
Ojibwa
Oriya
Oromo
Osage
Ossetian; Ossetic
Otomian languages

Pahlavi
Palauan
Pali
Pampanga; Kapampangan
Pangasinan
Panjabi; Punjabi
Papiamento
Papuan languages
Pedi; Sepedi; Northern Sotho
Persian
Persian
Persian, Old (ca.600-400 B.C.)
Philippine languages
Phoenician
Pohnpeian
Polish
Portuguese
Prakrit languages
Provençal, Old (to 1500);Occitan, Old (to
    1500)
Pushto; Pashto
Quechua
Rajasthani
Rapanui
Rarotongan; Cook Islands Maori
Romance languages
Romanian; Moldavian; Moldovan
Romanian; Moldavian; Moldovan
Romansh
Romany
Rundi
Russian
Salishan languages
Samaritan Aramaic
Sami languages
Samoan
Sandawe
Sango
Sanskrit
Santali
Sardinian
Sasak
Scots
Selkup
Semitic languages
Serbian
Serer
Shan
Shona
Sichuan Yi; Nuosu
Sicilian
Sidamo
Sign Languages
Siksika
Sindhi
Sinhala; Sinhalese
Sino-Tibetan languages
Siouan languages
Skolt Sami
Slave (Athapascan)
Slavic languages
Slovak
Slovak
Slovenian
Sogdian
Somali
Songhai languages
Soninke
Sorbian languages
Sotho, Southern
South American Indian languages
Southern Altai
Southern Sami
Spanish
Spanish; Castilian
Sranan Tongo
Sukuma

Sumerian	Tibetan	Tuvinian	Welsh
Sundanese	Tibetan	Twi	Western Frisian
Susu	Tigre	Udmurt	Wolaitta; Wolaytta
Swahili	Tigrinya	Ugaritic	Wolof
Swati	Timne	Uighur; Uyghur	Xhosa
Swedish	Tiv	Ukrainian	Yakut
Swiss German; Alemannic; Alsatian	Tlingit	Umbundu	Yao
Syriac	Tok Pisin	Upper Sorbian	Yapese
Tagalog	Tokelau	Urdu	Yiddish
Tahitian	Tonga (Nyasa)	Uzbek	Yoruba
Tai languages	Tonga (Tonga Islands)	Vai	Yupik languages
Tajik	Tsimshian	Venda	Zande languages
Tamashek	Tsonga	Vietnamese	Zapotec
Tamil	Tswana	Volapük	Zaza; Dimili; Dimli; Kirdki; Kirmanjki; Zazaki
Tatar	Tumbuka	Votic	Zenaga
Telugu	Tupi Languages	Wakashan languages	Zhuang; Chuang
Tereno	Turkish	Walloon	Zulu
Tetum	Turkish, Ottoman (1500-1928)	Waray	Zuni
Thai	Turkmen	Washo	
Tibetan	Tuvalu	Welsh	

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