

THOMSON RESPONSE TO RFQ #EBA165

Prepared for: STATE OF WEST VIRGINIA

Reference #: WWKMQ1086-04



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THOMSON RESPONSE TO RFQ #EBA165

September 23, 2008

Addressee:

Shelley Murray
Department of Administration
Purchasing Department
PO Box 50130
2019 Washington Street, East
Charleston, WV 25311

Tel.: 304-558-3400

Your Contact:

Jack McAnulty Eastern Regional Sales Manager Thomson Inc.

Email: jack.mcanulty@thomson.net

Tel.: 860-763-1100 Fax: 860-763-1151



THOMSON RESPONSE TO:

STATE OF WEST VIRGINIA RFP EBA165

SEPTEMBER 23, 2008

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State of West Virginia Department of Administration Purchasing Division 2019 Washington Street East Post Office Box 50130 Charleston, WV 25305-0130

Thompson Grass Valley (Thales)

Attention: Jack McAnulty

104 Feeding Hills Road

Southwick, MA 01077

Request for Quotation

RFONUMBER EBA165 PAGE

ADDRESS CORRESPONDENCE TO ATTENTION OF SHELLY MURRAY

EDUCATIONAL BROADCASTING AUTHORITY 600 CAPITOL STREET

304-558-8801

MT-P TO

CHARLESTON, WV 25301-1223

304-558-3400

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- 13. BANKRUPTCY: In the event the vendor/contractor files for bankruptcy protection, this Contract may be deemed null and void, and terminated without further order.
- 14. HIPAA BUSINESS ASSOCIATE ADDENDUM: The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (http://www.state.wv.us/admin/purchase/vrc/hipaa.htm) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
- 15. WEST VIRGINIA ALCOHOL & DRUG-FREE WORKPLACE ACT: If this Contract constitutes a public improvement construction contract as set forth in Article 1D, Chapter 21 of the West Virginia Code ("The West Virginia Alcohol and Drug-Free Workplace Act"), then the following language shall hereby become part of this Contract: "The contractor and its subcontractors shall implement and maintain a written drug-free workplace policy in compliance with the West Virginia Alcohol and Drug-Free Workplace Act, as set forth in Article 1D, Chapter 21 of the West Virginia Code. The contractor and its subcontractors shall provide a sworn statement in writing, under the penalties of perjury, that they maintain a valid drug-free work place policy in compliance with the West Virginia and Drug-Free Workplace Act. It is understood and agreed that this Contract shall be cancelled by the awarding authority if the Contractor: 1) Fails to implement its drug-free workplace policy; 2) Fails to provide information regarding implementation of the contractor's drug-free workplace policy at the request of the public authority; or 3) Provides to the public authority false information regarding the contractor's drug-free workplace policy."

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Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

Request for Quotation

RFONUMBER EBA165 PAGE 2

ADDRESS CORRESPONDENCE TO ATTENTION OF THE LT.Y MITER A Y

\$HELLY MURRAY 304-558-8801

RFQ COPY
TYPE NAME/
TYPE NAME/
THOMSON INC.
104 Feeding
Southwick M

TYPE NAME/ADDRESS HERE

THOMSON INC. 104 Feeding Hills Road Southwick, MA 01077 EDUCATIONAL BROADCASTING
AUTHORITY
600 CAPITOL STREET

CHARLESTON, WV

25301-1223

304-558-3400

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EBA165

Addendum No. 1

Question:

Could you send me the details of the Amber/Pearl multiplexer and PSIP system? We are looking for the model of each and how old they are.

Response:

The Amber is a TNM-4028 and was purchased in January 2002. The Pearl is version 1.7.3 and was purchased in January 2002.

Question:

This RFQ has a require for a multiplexer with up to 8 ASI inputs. Does this need to have 8 activated/available right away or does it just need to have the ability to add additional inputs (up to 8)?

Response:

The 8 ASI inputs need to be provided and activated now.

Rev. 09/08

State of West Virginia

VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with **West Virginia Code**, §5A-3-37. (Does not apply to construction contracts). **West Virginia Code**, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the **West Virginia Code**. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Resident Vendor Preference, if applicable.

1.	Application is made for 2.5% resident vendor preference for the reason checked: Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; or, Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or, Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; or,
2.	Application is made for 2.5% resident vendor preference for the reason checked: Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
3.	Application is made for 2.5% resident vendor preference for the reason checked: Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
4.	Application is made for 5% resident vendor preference for the reason checked: Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; or,
5.	Application is made for 3.5% resident vendor preference who is a veteran for the reason checked: Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; or,
6.	Application is made for 3.5% resident vendor preference who is a veteran for the reason checked: Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.
require against	understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the ments for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency acted from any unpaid balance on the contract or purchase order.
authorized the req	mission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and zes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid uired business taxes, provided that such information does not contain the amounts of taxes paid nor any other information d by the Tax Commissioner to be confidential.
and ac	penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true curate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate es during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.
Bidder	Monson Inc Signed: X Elevel
Date:	9/24/08 Title: BITE MANAGER

*Check any combination of preference consideration(s) indicated above, which you are entitled to receive.



State of West Virginia
Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

Request for Quotation

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ADDRESS:CORRESPONDENCE TO ATTENTION OF

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304-558-880 EDUCATIONAL

EDUCATIONAL BROADCASTING AUTHORITY 600 CAPITOL STREET

CHARLESTON, WV 25301-1223

304-558-3400

RFQ COPY TYPE NAME/ADDRESS HERE THOMSON INC. 104 FEEDING HILLS ROAD SOUTHWICK, MA 01077

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RFQ COPY

THOMSON INC.

TYPE NAME/ADDRESS HERE

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SEC NUMBER

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CHARLESTON, WV

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ADDRESS CORRESPONDENCE TO ATTENTION OF

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RICHARD E. FIORE

TITLE

THOMSON INC

TYPE NAME/ADDRESS HERE

104 FEEDING HILLS ROAD

SOUTHWICK, MA 01077

State of West Virginia Department of Administration Quotation Purchasing Division 2019 Washington Street East Post Office Box 50130 Charleston, WV 25305-0130

Request for

SHIP

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EBA165

ADDRESS:CORRESPONDENCE TO ATTENTION OF

SHELLY MURRAY 304-558-8801

EDUCATIONAL BROADCASTING AUTHORITY 600 CAPITOL STREET

CHARLESTON, WV

25301-1223 304-558-3400 DATE PRINTED TERMS OF SALE SHIP VIA EREIGHTTERMS 08/20/2008 BID OPENING DATE: BID OPENING TIME 09/30/2008 01:30PM LINE QUANTITY MOb ITEM NUMBER UNITPRICE AMOUNT ORDER ISSUED; OR (B) ASSESS A PENALTY AGAINST SUCH BIDDER IN AN AMOUNT NOT TO EXCEED 5% OF THE BID AMOUNT AND THAT SUCH PENALTY WILL BE PAID TO THE CONTRACTING AGENCY OR DEDUCTED FROM ANY UNPAID BALANCE ON THE CONTRACT OR PURCHASE ORDER. BY SUBMISSION OF THIS CERTIFICATE, BIDDER AGREES TO DISCLOSE ANY REASONABLY REQUESTED INFORMATION TO THE PURCHASING DIVISION AND AUTHORIZES THE DEPARTMENT OF TAX AND REVENUE TO DISCLOSE TO THE DIRECTOR OF PURCHASING APPROPRIATE INFORMATION VERIFYING THAT BIDDER HAS PAID THE REQUIRED BUSINESS TAXES, PROVIDED THAT SUCH INFORMATION DOES NOT CONTAIN THE AMOUNTS OF TAXES PAID NOR ANY OTHER INFORMATION DEEMED BY THE TAX COMMISSIONER TO BE CONFIDENTIAL. UNDER PENALTY OF LAW FOR FALSE SWEARING (WEST VIRGINIA CODE 61-5-3), BIDDER HEREBY CERTIFIES THAT THIS CERTIFICATE IS TRUE AND ACCURATE IN ALL RESPECTS; AND THAT IF A CONTRACT IS ISSUED TO BIDDER AND IF ANYTHING CONTAINED WITHIN THIS CERTIFICATE CHANGES DURING THE TERM OF THE CONTRACT, BIDDER WILL NOTIFY THE PURCHASING DIVISION IN WRITING IMMEDIATELY. THOMSON INC BIDDER: _9/19/08 DATE: SIGNED: TITLE: _SITE_MANAGER.

TERMS AND CONDITIONS ELEPHONE 413-998+1400

9/19/08

ADDRESS CHANGES TO BE NOTED ABOVE



State of West Virginia Department of Administration Purchasing Division 2019 Washington Street East Post Office Box 50130 Charleston, WV 25305-0130

Request for Quotation

EBA165

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SHELLY MURRAY

304-558-8801

EDUCATIONAL BROADCASTING

AUTHORITY 600 CAPITOL STREET

CHARLESTON, WV 25301-1223

304-558-3400

RFQ COPY TYPE NAME/ADDRESS HERE

THOMSON INC 104 FEEDING HILLS ROAD SOUTHWICK, MA 01077

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THOMSON INC

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104 FEEDING HILLS ROAD SOUTHWICK, MA 01077

State of West Virginia
Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130 Charleston, WV 25305-0130

Request for REGINDMEER

EBA165

ADDRESS CORRESPONDENCE TO ATTENTION OF

SHELLY MURRAY 304-558-8801

SH-P FO

EDUCATIONAL BROADCASTING **AUTHORITY** 600 CAPITOL STREET

CHARLESTON, WV

25301-1223

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West Virginia Public Broadcasting is requesting quotes on an ATSC compliant multiplexing-re-multiplexing/PSIP generating system. This system will accept up to eight ASI streams plus TCP/IP data and generate a broadcast-ready stream for transport to our transmitters. All software, hardware, cabling, and support will be awarded to a single vendor.

A trade-in allowance as a purchase option is requested.

1. General Requirements

- 1.1. West Virginia Public Broadcasting operates a Network Operating Center which provides programming to 3 full power DTV transmitters and 8 translators. Multiple programs are multiplexed and transported to the associated transmitters.
- 1.2. Vendor is requested to provide an "end to end" solution as described in Section 2 "Scope."
- 1.2.1. Three primary tasks will be performed by the system
- 1.2.1.1. Program multiplexing/re-multiplexing
- 1.2.1.2. PSIP generation and insertion
- 1.2.1.3. Traffic system interface
- 1.3. All equipment shall be factory new and shall not be used, refurbished, or B-stock.

2. Scope

- 2.1. Multiplexer/Re-multiplexer
- 2.1.1. The multiplexer/re-multiplexer shall accept a multiplexed ASI stream from existing encoders and multiplexer, along with 7 additional ASI sources, plus 1 (one) TCP/IP interface; for PSIP data

provided by a vendor-supplied sub-system (total of 9 individual inputs.) Inputs shall be re-multiplexed onto a single ASI output capable of output rates up to 90 Mbps.

- 2.1.1.1. The existing encoders and multiplexers are:
- 2.1.1.1.1 Two Harmonic MV-40 Encoders
- 2.1.1.1.2. One Harmonic MV-45 Encoder
- 2.1.1.1.3. One Harmonic MV-450 Encoder
- 2.1.1.1.4. One Harmonic MN-20 Multiplexer
- 2.1.1.1.4.1. Multiplexer also performs statistical multiplexing
- 2.1.2. The multiplexer/re-multiplexer shall have internal memory storage to ensure continuation of PSIP broadcast in the event of a PSIP generator failure.
- 2.1.3. The multiplexer/re-multiplexer shall be capable of multiplex bandwidth management and overflow prevention.
- 2.1.4. The multiplexer/re-multiplexer should be configured via standard web browser and front panel.
- 2.1.5. Multiplexer/re-multiplexer should be capable of IP data encapsulation/de-encapsulation.
- 2.2. PSIP Generator
- 2.2.1. Vendor shall provide a PSIP generator.
- 2.2.1.1. PSIP generator shall be ATSC A65C compliant.
- 2.2.1.2. PSIP generator shall produce all necessary tables to provide static and dynamic PSIP for a minimum of four minor channels.

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- 2.2.1.3. PSIP generator shall be capable of 4 days of Electronic Program Guide.
- 2.2.1.3.1. PSIP Generator shall extract EPG tables from existing traffic system.
- 2.2.1.3.1.1. Existing traffic system generates Protrack XML files.
- 2.2.2. PSIP Generator interface to multiplexer/re-multiplexer shall be TCP/IP.

3. Integration

- 3.1. All hardware, software, interconnecting cables and devices, standard EIA 19" rack mounting hardware, power supplies and cables shall be provided by the vendor.
- 3.1.1. All power supplies shall be internal to the equipment.
- 3.2. All hardware shall mount in a standard 19" rack, provided by West Virginia Public Broadcasting.

4. Installation and support

- 4.1. Vendor shall provide telephone support for initial installation and programming.
- 4.2. Vendor shall provide 24 hour toll free technical support for all hardware and software for a minimum of five years.
- 4.3. Vendor shall provide a minimum of one year parts and labor warranty.

5. Future upgrades

5.1. The multiplexing-re-multiplexing/PSIP generating system shall be field upgradeable in both hardware and software to accommodate revisions in industry standards and addition of services.

6. Trade-in Allowance Options

- 6.1. Vendor is requested to provide a "trade in allowance for existing multiplexer/re-multiplexer and PSIP generator.
- 6.1.1. Current Multiplexer/re-multiplexer is a Thompson Grass Valley "Amber".
- 6.1.2. Current PSIP generator is a Thompson Grass Valley "Pearl".
- 6.2. Quote shall list trade in allowance separately, as an option.

7. Definitions

- 7.1. ASI Asynchronous Serial Interface (ASI) (1) A streaming format like an MPEG Transport Stream (MPEGTS). It can contain a single program or be a multiplex of multiple programs, each consisting of video, audio and associated tables.
- 7.2. ATSC The Advanced Television Systems Committee, Inc., is an international, non-profit organization developing voluntary standards for digital television. The ATSC member organizations represent the broadcast, broadcast equipment, motion picture, consumer electronics, computer, cable, satellite, and semiconductor industries. Specifically, ATSC is working to coordinate television standards among different communications media focusing on digital television, interactive systems, and broadband multimedia communications. ATSC is also developing digital television implementation strategies and presenting educational seminars on the ATSC standards.
- 7.3. PSIP Program and Service Information Protocol is a small collection of tables designed to operate within every Transport Stream (TS) for terrestrial broadcast of digital television. Its purpose is to describe the information at the system and event levels for all virtual channels carried in a particular TS. Additionally, information for analog channels as well as digital channels from other Transport Streams may be incorporated. There are two main categories of information in the ATSC PSIP Standard, system information and program data. System information allows navigation and access of

the channels within the DTV transport stream, and the program data provides necessary information for efficient browsing and event selection. Some tables announce future events and some are used to locate the digital streams than make up an event. The PSIP data are carried via a collection of hierarchically arranged tables.

8. Shipping, delivery, and invoicing

- 8.1. Vendor shall provide shipping
- 8.1.1. Delivery shall be to:

 WVPBS

 124 Industrial Park Road

 Beaver WV, 25813

 Attn: Jeremy Scott 304-254-7865
- 8.2. All invoices shall be itemized as to cost
- 8.3. All invoices shall be sent to:

 West Virginia Public Broadcasting
 600 Capitol St.

 Charleston, WV 25301

 Attn. Steve Chapman

EBA165 PSIP Generating System Pricing Page

PSIP Generating System Base Bid	\$ 38,240.00
Optional Trade-in allowance "Amber"	\$ 4,032.00
Optional Trade-in allowance "Pearl"	\$ 3,456.00
Total (Base Bid minus Trade-in Allow:	\$_30,752.00 ance)

NOTE: Please refer to Section C for a detailed list of equipment and pricing.

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RFQ No.	EBA165
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STATE OF WEST VIRGINIA Purchasing Division

PURCHASING AFFIDAVIT

VENDOR OWING A DEBT TO THE STATE:

West Virginia Code §5A-3-10a provides that: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

PUBLIC IMPROVEMENT CONTRACTS & DRUG-FREE WORKPLACE ACT:

West Virginia Code §21-1D-5 provides that: Any solicitation for a public improvement construction contract shall require each vendor that submits a bid for the work to submit at the same time an affidavit that the vendor has a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the West Virginia Code. A public improvement construction contract may not be awarded to a vendor who does not have a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the West Virginia Code and who has not submitted that plan to the appropriate contracting authority in timely fashion. For a vendor who is a subcontractor, compliance with Section 5, Article 1D, Chapter 21 of the West Virginia Code may take place before their work on the public improvement is begun.

ANTITRUST:

In submitting a bid to any agency for the state of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the state of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the state of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the state of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership or person or entity submitting a bid for the same materials, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

LICENSING:

Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

CONFIDENTIALITY:

The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendors should visit www.state.wv.us/admin/purchase/privacy for the Notice of Agency Confidentiality Policies.

Under penalty of law for false swearing (West Virginia Code §61-5-3), it is hereby certified that the vendor acknowledges the information in this said affidavit and is in compliance with the requirements as stated.

Vendor's Name: THOMSON	INC)			
Authorized Signature:	Y HUN) Da	te: 9/19/	08
Purchasing Affidavit (Revised 07/01/0)	8)			



West Virginia Public Broadcasting is requesting quotes on an ATSC compliant multiplexing-re-multiplexing/PSIP generating system. This system will accept up to eight ASI streams plus TCP/IP data and generate a broadcast-ready stream for transport to our transmitters. All software, hardware, cabling, and support will be awarded to a single vendor.

A trade-in allowance as a purchase option is requested.

- 1. General Requirements
- 1.1 West Virginia Public Broadcasting operates a Network Operating Center which provides programming to 3 full power DTV transmitters and 8 translators. Multiple programs are multiplexed and transported to the associated transmitters.

Understood

1.2. Vendor is requested to provide an "end to end" solution as described in Section 2 "Scope."

Comply

1.2, 1. Three primary tasks will be performed by the system

Comply

1.2.1.1. Program multiplexing/re-multiplexing

Comply

1.2.1.2. PSIP generation and insertion



1.2.1.3. Traffic system interface

Comply

1.3. All equipment shall be factory new and shall not be used, refurbished, or B-stock.

Comply

- 2. Scope
- 2.1. Multiplexer/Re-multiplexer
- 2. 1. 1. The multiplexer/re-multiplexer shall accept a multiplexed ASI stream from existing encoders and multiplexer, along with additional ASI sources, plus 1 (one) TCP/IP interface; for PSIP data provided by a vendor-supplied sub-system (total of 9 individual inputs.) Inputs shall be re-multiplexed onto a single ASI output capable of output rates up to 90 Mbps.

Comply – Thomson is offering the Amber Model Number TNM-4068-A - The Thomson Amber II is a versatile, cost-effective solution in a 1 RU platform that combines advanced SI-processing capabilities with integrated and powerful remultiplexing features. It also provides service deletion, insertion, local date insertion—including SI tables, electronic program guides, IP, and interactive applications—as well as bandwidth optimization.

- 2.1.1.1. The existing encoders and multiplexers are:
- 2. 1. 1. 1. Two Harmonic MV-40 Encoders

Understood

2.1.1.1.2. One Harmonic MV-45 Encoder

Understood



THOMSON POINT BY POINT RESPONSE TO STATE OF WEST VIRGINIA RFQ #EBA165

CHARLESTON, WV THOMSON PROPOSAL #WWKMQ1086-04 SEPTEMBER 8, 2008
2.1.1.1.3. One Harmonic MV-450 Encoder
Understood
2.1.1.1.4. One Harmonic MN-20 Multiplexer
Understood
2.1.1.4.1. Multiplexer also performs statistical Multiplexing
Understood
2.1.2. The multiplexer/re-multiplexer shall have internal memory storage to ensure continuation of PSIP broadcast in the event of a PSIP generator failure.
Comply
2.1.3. The multiplexer/re-multiplexer shall be capable of multiplex bandwidth management and overflow prevention.
Comply
2.1.4. The multiplexer/re-multiplexer should be configured via standard web browser and front panel.
Comply
2.1.5. Multiplexer/re-multiplexer should be capable of IP data encapsulation/de-encapsulation.

THOMSON POINT BY POINT RESPONSE TO WV#EBA165 RFQ Page 3 of 9



- 2.2. PSIP Generator
- 2.2.1. Vendor shall provide a PSIP generator.

Comply – Thomson is offering the Pearl Model Number TNM-5721 with XML input option TNM-5795. An efficient, scalable tool that provides accurate PSIP information, our Pearl ATSC-PSIP generator provides fully compliant static and dynamic output, versatile remote editing, comprehensive source-management capabilities, and an optional smart-data package for integration with our Amber/NetProcessor processors to provide fully compliant MPEG-2/ATSC transport streams. In addition, the Pearl generator lets broadcasters easily fulfill the latest FCC requirements for dynamic PSIP generation, broadcast-flag management, and audio signaling.

2.2.1.1. PSIP generator shall be ATSC A65C compliant.

Comply

2.2.1.2. PSIP generator shall produce all necessary tables to provide static and dynamic PSIP for a minimum of four minor channels.

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Comply

2.2.1.3. PSIP generator shall be capable of 4 days of Electronic Program Guide.



2,2.1.3. 1. PSIP Generator shall extract EPG tables from existing traffic system.

Comply

2.2.1.3.1.1. Existing traffic system generates Protrack XML files

Understood

2.2.2. PSIP Generator interface to multiplexer/re-multiplexer shall be TCP/IP.

Comply

3. Integration

3.1 All hardware, software, interconnecting cables and devices, standard EIA 19" rack mounting hardware, power supplies and cables shall be provided by the vendor.

Comply

3. 1. 1. All power supplies shall be internal to the equipment.

Comply

3.2. All hardware shall mount in a standard 19" rack, provided by West Virginia Public Broadcasting.



4. Installation and support

4.1. Vendor shall provide telephone support for initial installation and programming.

Comply

4.2. Vendor shall provide 24 hour toll free technical support for all hardware and software for a minimum of five years.

Comply

4.3. Vendor shall provide a minimum of one year parts and labor warranty.

Comply

5. Future upgrades

5.1. The multiplexing-re-multiplexing/PSI P generating system shall be field upgradeable in both hardware and software to accommodate revisions in industry standards and addition of services.

Comply

6. Trade-in Allowance Options

6.1 Vendor is requested to provide a "trade in allowance for existing multiplexer/re-multiplexer and PSIP generator.

Comply. Please see pricing page for details.



6, 1. 1. Current Multiplexer/re-multiplexer is a Thompson Grass Valley "Amber"

Understood

6.1.2. Current PSIP generator is a Thompson Grass Valley "Pearl"

Understood

6.2, Quote shall list trade in allowance separately, as an option.

Comply. Please see pricing page for details

7. Definitions

All definitions - Understood.

- 7.1. ASI Asynchronous Serial Interface (ASI) (1) A streaming format like an MPEG Transport Stream (MPEGTS). It can contain a single program or be a multiplex of multiple programs, each consisting of video, audio and associated tables.
- 7.2. ATSC The Advanced Television Systems Committee, Inc., is an international, non-profit organization developing voluntary standards for digital television. The ATSC member organizations represent the broadcast, broadcast equipment, motion picture, consumer electronics, computer, cable, satellite, and semiconductor industries. Specifically, ATSC is working to coordinate television standards among different communications media focusing on digital television, interactive systems, and broadband multimedia communications. ATSC is also developing digital television implementation strategies



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and presenting educational seminars on the ATSC standards.

7.3. PSIP Program and Service Information Protocol is a small collection of tables designed to operate within every Transport Stream (TS) for terrestrial broadcast of digital television. Its purpose is to describe the information at the system and event levels for all virtual channels carried in a particular TS. Additionally, information for analog channels as well as digital channels from other Transport Streams may be incorporated. There are two main categories of information in the ATSC PSIP Standard, system information and program data. System information allows navigation and access of the channels within the DTV transport stream, and the program data provides necessary information for efficient browsing and event selection. Some tables announce future events and some are used to locate the digital streams than make up an event. The PSIP data are carried via a collection of hierarchically arranged tables.

- 8. Shipping, delivery, and invoicing
- 8.1 Vendor shall provide shipping

Comply

8. 1. 1. Delivery shall be to:WVPBS124 Industrial Park RoadBeaver WV, 25813Attn: Jeremy Scott 304-254-7865

Comply

8.2. All invoices shall be itemized as to cost

Comply – Please see pricing page for details.



8.3. All invoices shall be sent to:

West Virginia Public Broadcasting 600 Capitol St. Charleston, WV 25301 Attn. Steve Chapman

Comply

EBA165 PSIP Generating System Pricing Page

PSIP Generating System Base Bid \$ 38,240.00

Optional Trade-in allowance

\$ 4,032.00

"Amber"

Optional Trade-in allowance

\$ 3,456.00

"Pearl"

Total

\$ 30,752.00

(Base Bid minus Trade-in Allowance)



Thomson Inc 104 Feeding Hills Rd Southwick, MA 01077 Phone (413)-998-1100 Fax Purchase Orders to: (413)-998-1178 http://www.thomsongrassvalley.com/

PROPOSAL

Proposal Number

WWKMQ1086-04

9/10/2008

Prepared For:

West Virginia Public Broadcasting

Shelly Murray

2019 Washington St. East

Charleston, West Virginia 25311

Phone:

1-304-558-8801

Fax:

Submitted By:

Jack McAnulty

104 Feeding Hills Rd Southwick, MA 01077

USA

1-860-763-1100

jack.mcanulty@thomson.net

Standard Terms and Conditions

THOMSON INC PROPOSES TO SELL AND DELIVER THE EQUIPMENT, SOFTWARE AND/OR SERVICES DESCRIBED HEREIN ON THE ATTACHED SCHEDULE A IN ACCORDANCE WITH AND SUBJECT TO THE STANDARD TERMS AND CONDITIONS OF SALE SET FORTH IN THIS PROPOSAL

CONFIDENTIAL INFORMATION

THE INFORMATION IN THIS PROPOSAL IS CONFIDENTIAL AND MAY BE LEGALLY PRIVILIGED. THE PROPOSAL DISSEMINATION OR REPRODUCTION IS STRICTLY PROHIBITED AND MAY BE UNLAWFUL. IF ANY UNAUTHORIZED INDIVIDUAL OR ORGANIZATION IS IN POSSESSION OF THIS DOCUMENT. ALL COPIES SHOULD BE IMMEDIATELY DESTROYED.



Thomson Inc - 104 Feeding Hills Rd. - Southwick, MA - 01077 - Phone (413)-998-1100 - Fax Purchase Orders to: (413)-998-1178 http://www.thomsongrassvalley.com/



Proposal Schedule A

West Virginia Public Broadcasting

Shelly Murray 2019 Washington St. East Charleston, West Virginia 25311 Proposal Number:

WWKMQ1086-04

Proposal Date:

09/08/08

Proposal Valid:

30 days from above date.

NOTE: THIS SPECIFIC PROPOSAL IS SUBJECT TO THE ENCLOSED TERMS & CONDITIONS OF SALE.

Ln#	Qty	Model/Part No.	Product Description	Unit Amount	Total Amount
1.	1	TNM-4068-A	AMBER DTV Processor - 8 ASI Inputs & 1 ASI/310M Output - 1RU - Advanced front panel - Bit rate up to 90 Mbps - Ethernet Configuration - ATSC Version.	\$20,160.00	\$20,160.00
3.	1	Amber Trade	Trade In Value for Amber	-\$4,032.00	-\$4,032.00
4 .	1	Pearl	Pearl PSIP Generator with XML Input	\$17,280.00	\$17,280.00
5 .		TNM-5721	PEARL Dynamic PSIP Generator - includes PEARL Editor and Multi-sources management - 4 days of EPG information - Complies with FCC 2004 PSIP Recommendations - 1RU - 1 Ethernet link to Amber.		
6.		TNM-5795	Additional input interface for Thomson XML-PSIP source		
7.	1	Pearl Trade	Trade In Value for Pearl	-\$3,456.00	-\$3,456.00
8 .			we will be a second of the sec		
9.	1	FACTINT	Factory Integration - includes cables.	\$700.00	\$700.00
10.					
11.	1	Shipping	Shipping	\$100.00	\$100.00
12.					

PROPOSAL GRAND TOTAL:

\$30,752.00

Sales tax is not included in this proposal total. Sales tax (if required) will be invoiced according to point of delivery, unless a valid tax exemption certificate is provided. Shipping and insurance costs are included in the Grand Total.

Payment Terms:

Net 30 upon credit approval

Delivery Terms:

Destination

Best Way, Surface

Ship Method: Valid Until:

10/08/08

Shipments are FOB Destination.

This is a one-time offer and is given as a Customer accommodation and does not guarantee that similar pricing will be given in the future.



Terms and Conditions of Sale

1. CONTROLLING PROVISIONS.

1. CONTROLLING PROVISIONS.

As used in these Terms and Conditions of Sale ("Terms and Conditions"), the term product(s), includes good and services and/or license(s) to use software listed, described and/or specified herein (hereinafter collectively referred to as the "Products") Thomson's acceptance of Customer's order is expressly conditioned upon Customer's assent to these Terms and Conditions to the order is expressly conductions of plor Customer's assent to these refins and conductors to the exclusion of any additional or different terms or conditions on Customer's order form or any other Customer documents. No waiver, alteration or modification of any of these Terms and Conditions shall be valid unless made in a writing specifically referencing these Terms and Conditions and signed by an officer or other duly authorized representative of Customer and Grass Valley. It is expressly agreed between Grass Valley and Customer that the sale of the Products is governed exclusively by these Term and Conditions.

2. PRICES.

Prices are exclusive of taxes, shipping, and insurance. US domestic prices apply to products purchased in the US for use in the US. Export prices apply to products purchased in the US for export. Unless otherwise indicated, Thomson quotations are valid for thirty (30) days from date of

Any and all state and local sales, use, excise, privilege, and similar taxes imposed on Thomson or which Thomson has a duty to collect in connection with the sale, delivery, or use of any product will appear as separate items on the invoice. If sales to Customer are exempt from such taxes, Customer shall furnish Thomson with a properly executed resale or exemption certificate from the state into which the product is being shipped. Thomson reserves the right to bill tax at a later date if it is determined that a resale or exemption certificate previously accepted by Thomson is not honored by the taxing jurisdiction or if an assessment or adjustment is made under audit.

4. INVOICES AND PAYMENTS.

Upon each shipment, Thomson will issue an invoice to the address specified in Customer's order. All payment terms are subject to prior credit approval by Thomson. Upon approval, Thomson's standard payment terms are net thirty (30) days after the date of shipment of the Products, regardless of when the Products are placed into service or whether ancillary commissioning or related services have been offered or performed by Thomson. Thomson may change its credit terms and/or suspend performance under any order when, in the opinion of Thomson, Customer's financial condition or record of payment so warrants. Customer agrees to pay any third-party collection expenses, including attorney's fees, incurred by Thomson to collect any unpaid amounts. All payment shall be in United States dollars.

5. SHIPMENT, DELIVERY AND ACCEPTANCE.

- 5. Shifffelini, DELIVERT AND ACCEPTANCE.
 a) Except for obligations under warranty, Thomson's responsibility for the Products ceases upon delivery to the carrier. DELIVERY SHALL BE F.O.B. Origin or in the case of equipment shipped from outside the United States, F.O.B. DDP US Port or Airport with title and risk of loss passing at the point at which conditional release is received from U.S. Customs. THOMSON TAKES NO RESPONSIBILITY FOR INSURANCE OF SALD SHIPMENT WITHOUT PRIOR WRITTEN AGREEMENT. ACCORDINGLY, THE CUSTOMER IS ADVISED TO INSURE THE PRODUCTS FOR THEIR FULL REPLACEMENT VALUE.
- b) Thomson will schedule shipments based on Customer's requests and Thomson's estimated shipping capability, provided Customer's order requests shipment within tweive (12) months from the date of the order. Thomson may make partial shipments unless Customer's order specifically
- c) Thomson will not be liable for any delay or failure to deliver resulting from circumstances beyond Thomson's reasonable control or circumstances which would cause Thomson to incur unreasonable expense.
- d) All requests to reschedule or cancel an order are subject to acceptance by Thomson. Thomson reserves the right to assess a rescheduling charge for requests received within 30 days of a scheduled shipping date. The rescheduling charge will vary by Product and order
- e) Thomson may, at its option, for a period of 90 days following shipment of Product to customer accept the return of new, unused and unopened Product in the original cartons subject to the assessment of a 15% restocking fee,

6. TITLE, RISK OF LOSS, AND SECURITY INTEREST.

Title to all Products (except software) and risk of loss will pass to Customer upon tender to the carrier. Title to software products will remain with Thomson or its licensors. Thomson reserves a security interest in each Product until the entire amount due has been paid. Upon the request of Thomson, customer agrees to take such actions, including without limitation executing and delivering such documents and instruments, as may be necessary or proper to evidence, perfect, maintain and enforce such security interest.

7. INTELLECTUAL PROPERTY AND SOFTWARE.

No rights to any intellectual property covering, pertaining to, relating to or residing in (a) any of the Products, alone or in combination with any other one or more of the Products, or (b) any documentation or data furnished to the Customer pursuant hereto for use with the Products are granted to the Customer by Thomson, except that Thomson does give the Customer the right to use (a) the Products in the manner in which they are designed to operate, are programmed and are configured at the time of delivery to the Customer and (b) such documentation or data solely with the Products. Software, including software products and software incorporated within products, e.g., in ROM or on internal media, is provided under license and is subject to the terms of a separate license agreement, a copy of which may be obtained from any Thomson's corporate offices. Customer shall not disassemble or decompile or reverse engineer Thomson software Customer may use and reproduce the software only as permitted by the applicable license.

8. PATENT AND COPYRIGHT LIMITED INDEMNIFICATION.

a) Thomson, at its own expense, shall defend any suit brought against the Customer insofar as it is based upon a claim that one or more of the Products, as such, directly infringe any third party's patent or copyright, and shall indemnify the Customer against any final award of damages or costs in any such suit that are attributable to such claim or will pay the part of any settlement that is attributable to such claim. This indemnity is conditional upon the Customer giving Thomson prompt notice in writing of any suit for

such infringement, full authority (at Thomson's option) to settle or to conduct the defense thereof, and full assistance and cooperation in the defense.

- b) In its defense or settlement of any claim, Thomson at its own election and expense may (i) procure for the Customer the right to continue using the Product, (ii) modify such Product so as to become non-infringing, (iii) modify the product so that its use becomes non-finginging, or (iv) provide Customer an opportunity to return the Product for a refund of the depreciated purchase price. The depreciation will be calculated at a rate of 25% per year on a straight-line basis. Thomson shall have no liability to Customer for claims of infringement based upon 1) the use of any product in a manner other than for which it is intended or in combination with any product any product in a manife of which it is intended or in combination will any product of signed, manufactured, or modified to the specifications of Customer. Thomson shall have no liability to Customer for claims of infringement based upon 1) the use of any product in a manner other than that for which it is intended or in combination with any product not supplied by Thomson or 2) the use of any product designed, manufactured, or modified to the specifications of Customer.
- c) The foregoing states the entire obligation and liability of Thomson with respect to infringement and claims thereof. $\frac{1}{2} \int_{-\infty}^{\infty} \frac{1}{2} \left(\frac{1}{2} \int_{-\infty}^{\infty} \frac{1}{2} \left(\frac{1$

9. WARRANTY.

Thomson warrants to its Customers that the Products will be free from defects in materials and workmanship for the periods set forth in the applicable warranty statements, copies of which may be obtained from Thomson's corporate offices. If any such Product proves defective during the warranty period, Thomson will repair or replace the defective Product pursuant to the terms of the

THOMSON NEITHER ASSUMES (NOR HAS AUTHORIZED ANY PERSON TO ASSUME FOR IT) ANY OTHER WARRANTY OR LIABILITY IN CONNECTION WITH THE PRODUCTS. THE WARRANTIES REFERENCED IN THIS SECTION ARE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

10. USE OF RECONDITIONED MATERIAL. THOMSON PRODUCTS MAY INCLUDE MATERIALS THAT ARE NEW OR RECONDITIONED TO LIKE-NEW PERFORMANCE AND FUNCTIONALITY.

11. LIMITATION OF LIABILITY.
NOTWITHSTANDING SECTION 2-715 OF THE UNIFORM COMMERCIAL CODE, IN NO
EVENT SHALL THOMSON BE LIABLE FOR ANY INCIDENTAL, INDIRECT, SPECIAL OR
CONSEQUENTIAL DAMAGES BY REASON OF ANY ACT OR OMISSION OR ARISING OUT
OF OR IN CONNECTION WITH THE PRODUCTS OR THEIR SALE, DELIVERY, OF OR IN CONNECTION WITH THE PRODUCTS OR THEIR SALE, DELIVERY,
INSTALLATION, MAINTENANCE, OPERATION, PERFORMANCE OR USE, INCLUDING
WITHOUT LIMITATION ANY LOSS OF USE, LOST REVENUES, LOST PROFITS, COSTS OF
CAPITAL, DAMAGE TO ASSOCIATED PRODUCTS OR EQUIPMENT OR TO FACILITIES,
COSTS OF SUBSTITUTE PRODUCTS, FACILITIES OR SERVICES, COSTS ASSOCIATED
WITH DOWN TIME, COSTS OF REPLACEMENT POWER, AND ANY SIMILAR OR
DISSIMILAR LOSSES, COSTS OR DAMAGES. FURTHERMORE, THOMSON'S LIABILITY
TO THE CUSTOMER FOR ANY CLAIM OR RECOVERY OF ANY KIND HEREUNDER SHALL IN NO EVENT EXCEED THE PURCHASE PRICE PAID FOR THE PRODUCTS WITH RESPECT TO WHICH SUCH A CLAIM OR RECOVERY IS MADE.

12. EXPORT RESTRICTIONS.

Customer shall not export, re-export, or transfer, directly or indirectly, any product or technical data received hereunder, to any country or user to which such export, re-export or transfer is restricted by United States or local country law or regulation without first obtaining any required governmental license, authorization, certification or approval. If Customer resells or otherwise disposes of any product or technical data purchased hereunder, it will comply with any export restrictions applicable to such transfer.

Thomson shall have no liability for delayed delivery or non-delivery resulting from denial, revocation, suspension or governmental delay in issuance, of any necessary export license or

13. WAIVER.

The failure of either party to enforce any provision of these Terms and Conditions shall not be construed as a valver of such provision or the right thereafter to enforce each and every provision. No walver by either party, express or implied, of any breach of these Terms and Conditions shall be construed as a walver of any other breach of such term or condition.

14. ASSIGNMENT.

Customer may not assign or otherwise transfer its rights or obligations under these Terms and Conditions without the prior written consent of Thomson. No attempt to assign or transfer in violation of this provision will be binding upon Thomson. Thomson may assign or otherwise transfer its rights and obligations under these Terms and Conditions.

15. APPLICABLE LAW.

These Terms and Conditions will be construed and interpreted in accordance with the laws of the Commonwealth of Massachusetts, without regard to principles of choice of law. These Terms and Conditions shall not be governed by the United Nations Convention on Contracts for the International Sale of Goods, the application of which is hereby expressly excluded.

All notices shall be given in writing and deemed effective upon receipt. Notices to Customer will be sent to the ordering office or other address shown in Customer's order. Notices to Thomson should be sent to the Thomson sales office identified by Thomson as being responsible for the

17. CUSTOMER USE OF US GOVERNMENT CLAUSES.

Thomson is a "commercial item" manufacturer and supplier as defined in Part 2 of the Federal Acquisition Regulations (FAR) and will accept those clauses required to be included in the acquisition of commercial items by FAR Part 12. Tailored clauses and any additional Terms and Conditions as described in FAR 12.302 require Thomson written acceptance.



Acceptance of Proposal

By executing this Acceptance of Proposal I have reviewed Schedule A and agree with the quantities and equipment listed therein. I acknowledge the Terms and Conditions set forth herein and specifically agree that these Terms and Conditions shall solely and exclusively govern the purchase and sale of equipment, software and/or services described herein. In addition, I acknowledge that I am qualified and authorized to accept this proposal on behalf of the organization listed below on this proposal.

West Virginia Public Broadcasting 2019 Washington St. East Charleston, West Virginia 25311 Proposal Number: WWKMQ1086-04

Proposal Dated: 09/08/08

Submitted By: Jack McAnulty

1-304-558-880	1							
Partial shipmen	ts are accepta	ble and will be invoice	ed/accepted accordin	g to the terms of this proposal.				
Yes] No	Initial						
Purchase will be	e taxable acco	ording to state/local ta	x laws for point of de	elivery.				
Yes	No	Initial						
Each shipment to be insured by Thomson unless otherwise specified on Customer Purchase Order.								
Yes [No	Initial	en de					
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	Printed Name		Title					
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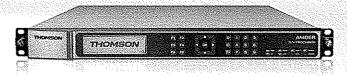
Form SA.16002 Rev 05

THOMSON

Amber II

REMULTIPLEXER & TRANSPORT-STREAM PROCESSOR

Supporting DVB or ATSC signals, the Thomson Amber II remultiplexer and MPEG transport-stream processor is an ideal solution for effective digital TV program management.



The Thomson Amber II is a versatile, cost-effective solution in a 1 RU platform that combines advanced SI-processing capabilities with integrated and powerful remultiplexing features. It also provides service deletion, insertion, local date insertion—including SI tables, electronic program guides, IP, and interactive applications—as well as bandwidth optimization.

These features, as well as its support for DVB or ATSC signals, make the Amber II platform an ideal solution for effective digital TV program management.

The Amber II platform is available in two models: the Amber II Starter, which handles simple MPEG stream-processing applications; and the Amber II DTV for advanced applications. You can also enhance the Starter model with hardware options to reach the level of the DTV model.

Advanced MPEG Processing

The Amber II platform features a number of MPEG transport-stream processing capabilities, including service and component filtering and remapping. It also offers advanced management of PSI/SI tables, including automatic generation and extraction of incoming DVB tables,

injection from section files, and sections generated from our Jade DVB-SI server.

The Amber II line delivers up to 180 Mb/s of transport-stream bandwidth. It also provides service deletion and insertion as well as local date insertion, including SI tables, electronic program guides, IP, and interactive applications. As well, it supports DVS-525/SCTE-104 messages and can insert SCTE 35 tables for digital program insertion applications.

Data Insertion/Bandwidth Optimization

To optimize the available bandwidth, the Amber II platform supports constant bit rate and opportunistic data injection from Thomson IP encapsulators or data servers. It features IP MPEG encapsulation/decapsulation for simple datacasting and IP routing. And it can multiplex MHP applications into audio/video services with the appropriate signaling.

Bandwidth Management and Overflow Prevention

For bandwidth management and overflow protection, the Amber II platform provides bit-rate monitoring and policing based on the ability to drop services the case of an output overflow.

System Management

The Amber II platform has a number of configuration, display, monitoring, and control features allowing you to manage its operation.

For easy access and configuration, the platform features an embedded Web server and a drag-and-drop graphical interface; the Amber DTV model features an LCD screen and keypad for easy access to parameters.

You can change configurations at any time without disturbing the platform's multiplexing. You can also store multiple configurations and activate them via a graphical interface or configuration-scheduler software—or via GPI, SNMP, or SCTE 35 in-band triggers.

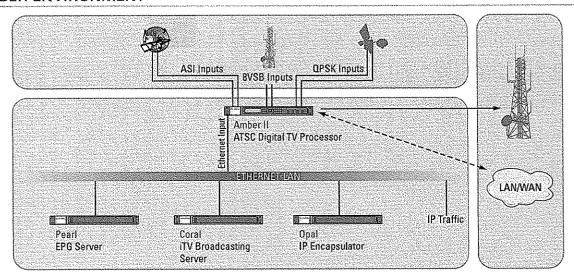
The display of the Amber II platform features LEDs for quick status detection as well as power and alarm LEDs on the front panel.

For monitoring—as well as configuration—the platform offers an advanced statistical display as well as a simple networking management protocol (SNMP) agent. For comprehensive control, it supports our Lazulite and XMS network management systems.

KEY FEATURES

- Compact and efficient MPEG remultiplexer
- · Input/output bit rate up to 180 Mb/s
- · Remultiplexing of up to 8 ASI
- Advanced management of PSI/SI/PSIP tables
- · PID filtering/remapping
- IP encapsulation and decapsulation
- Opportunistic data insertion and MHP Support
- . SCTE 35 digital cue-tone insertion
- Bandwidth optimization and overflow orevention
- Easy configuration via Web server
- Supports management viaThomson Lazulite and XMS solutions
- · Optional QPSK front-end





SPECIFICATIONS

DVB-ASI Interfaces

- Amber II DTV: 2 to 8 DVB ASI in, up to 180 Mb/s on 4, up to 90 Mb/s on the remaining
- Amber II Starter: 1 to 8 DVB ASI in, up to 50 Mb/s
- 4 DVB ASI or SMPTE 310M output, conveying the same generated transport stream

RF Input Interfaces

- Up to 2 inputs compliant with 8VSB or QPSK specifications
- 75Ω Type F connectors (Amber II DTV only)

GPI Inputs

 $2\times50\Omega$ BNC inputs to activate a stored configuration

Free Voltage Contacts

Three relay closure: power off, error status, warning status

External Clock

 50Ω BNC feeds the equipment with a channel clock, setting the output stream rate.

10/100Base-T Ethernet

1 interface for configuration and supervision, data injection (table servers and packet servers)

Management

- LCD screen and keypad for easy access to parameters (Amber DTV only)
- LEDs for quick status detection; power and alarm LEDs on front panel
- Embedded Web server for control and configuration
- Drag and drop GUI for service/ component selection
- Advanced statistical display
- SNMP v.1/2 agent for configuration and monitoring
- Supports Lazulite and XMS network management systems
- Supports activation of stored configurations via GUI, GPI, configuration scheduler, SNMP and SCTE 35 in-band triggers

Physical Characteristics

- 18U x 19*
- Weight: 8 kg (17.6 lbs.)
- 110V to 240 VAC, max 100W
- · Optional redundant power supply

Environmental Conditions

- Operating temperature 0° to 50°C (41° to 104°F)
- Storage temperature -40" to 70"C (23°to 113°F)
- Operating and storage: 5% to 90% relative humidity, non-condensing

CE

ORDERING INFORMATION

TNM-405x-y

AMBER II Starter: DTV adapter, x = 1, 2, 4, or 8 ASI inputs and 1 ASI/310M output, 1 RU, LED front panel, bit rate up to 50 Mb/s. Ethernet configuration, y = D (DV8 version) or A (ATSC version)

TNM-406x-y

AMBER II Advanced: DTV processor, x = 2, 4, or 8 ASI inputs and 1 ASI output, 1 RU, advanced front panel, bit rate up to 90 Mb/s, Ethernet configuration, y = D (DVB version) or A (ATSC version)

Compliance

HEADQUARTERS

Thomson Worldwide Headquarters 46 Quai A. Le Gallo 92648 Boulogne Cedex FRANCE

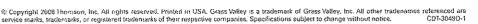
PROFESSIONAL SERVICES

Our professional services offerings ensure optimal system performance and maximize uptime. These services include call centers staffed around the clock; system planning, design, and commissioning; professional training courses; and technical maintenance programs and service agreements.

www.thomsongrassvalley.com/support

FINANCING

Financing is available through Thomson financial services. Please contact your products representative for more details.





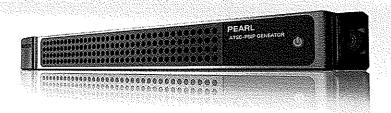
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THOMSON

Pearl

ATSC-PSIP GENERATOR

Pearl is the ultimate solution for PSIP data generation. It can handle programming data from traffic/ automation systems as well as last-minute program-provider changes, all while combining the utmost performance and versatility with full FCC compliance.



The ATSC program and system information protocol (PSIP) enables effective channel branding and tuning/hopping in a receiver—and a compelling electronic program guide (EPG) experience for the viewer.

An efficient, scalable tool that provides accurate PSIP information, our Pearl ATSC-PSIP generator provides fully compliant static and dynamic output, versatile remote editing, comprehensive source-management capabilities, and an optional smart-data package for integration with our Amber/NetProcessor processors to provide fully compliant MPEG-2/ATSC transport streams. In addition, the Pearl generator lets broadcasters easily fulfill the latest FCC requirements for dynamic PSIP generation, broadcast-flag management, and audio signaling.

Static and Dynamic PSIP Generation

The Pearl platform's built-in scheduler creates all the necessary tables (MGT, VCT, EIT, ETT, etc.) to provide static and dynamic PSIP generation, enabling you to create consistent PSIP data.

Versatile Remote Editor

A powerful and versatile editor within the Pearl generator lets you easily build a complete broadcast network setup, with multiple transport streams and channels. Other advanced features include recurring-event management and last-minute change management. In addition, a powerful event-overrun feature lets you rapidly modify the end time of an event, delete events, and much more.

Multiple-Source Management

In addition to its powerful editing capabilities, the Pearl PSIP generator automatically prioritizes, merges, and manages multiple input types through its built-in, multi-source management system.

For instance, you can use several different and independent sources to feed data into the Pearl system; each source can be assigned a priority level and restricted to import a specific kind of data. Pearl merges all the different sources to produce the EPG; if several sources are authorized to import the same kind of data, the generated guide will contain information of the highest-priority source.

To support this capability, the generator features a common XML file interface so that external sources of programming information can feed the PSIP-generation system. The interface fully supports the popular Tribune Media Services (TMS) listing services for automatic data import.

Advanced PMCP

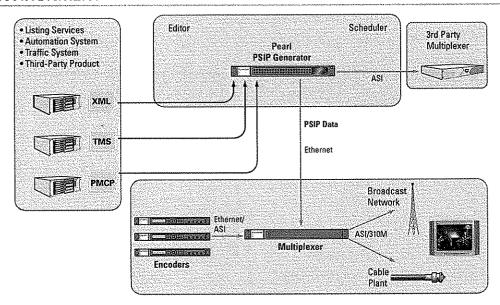
The Pearl platform also supports the Programming Metadata Communication Protocol (PMCP) import/export described in the ATSC A/76 standard and can easily connect its PSIP generator to third-party automation and traffic systems.

KEY FEATURES

- Listing, automation, and trafficdata merging using multi-source management with data prioritization
- Compliant with FCC-07-228
- Enhanced operational editing and scheduling capabilities
- Supports PMCP import and export
- ImportsTMS listing files automatically
- XML-enabled to facilitate connectivity
- · Broadcast flag management
- Ethernet and/or ASI output capability
- User-friendly graphical user interface for control and supervision



PEARL ENVIRONMENT



Efficient and Scalable System and Smart Data Package

Tailored to fulfill demanding—and frequently changing—operator requirements, the scalable Pearl generator lets you link multiple channels by entering an EPG once, while broadcasting it in several transport streams. You can also generate PSIP information for several transport streams.

The generator also manages the broadcast flag to signal copyrighted programs and enables you to dynamically manage

a channel's status by enabling the hidden flag in the EPG to be sent for channels not currently available.

To provide high reliability and performance, we offer an optional smart data package for fully integrating the Pearl generator with our popular Amber DTV processor or NetProcessor via an Ethernet link. The Amber or NetProcessor stores and carousels the current version of each table, guaranteeing that critical PSIP information is always carried in the signal. The processor also dynamically reconciles PSI and PSIP information to prevent coherence errors in the transport stream.

SPECIFICATIONS

EPG-Related Features

- ATSC private informations descriptor support
- Genre descriptor support
- Fulfils FCC 2004 PSIP mandate for dynamic PSIP generation
- PSIP editor (PSIP configuration, edition)
- PSIP tables support (MGT, STT, VCT, RRT, EIT, DET, ETT, DCCT)
- PMCP import/export support
- · Multi-source management
- · Broadcast flag support

Innuts

- XML files
- XML PSIP files
- TMS files
- PMCP XML file format
- PMCP Ethernet input

Outputs

- ASI output interface
- · Ethernet output to Amber multiplexer
- · PMCP Ethernet output

Physical Characteristics

- 1 RU x 19*
- 100-240V, 50-60 Hz power supply

Environmental Conditions

- Operational temperature: 0 to 40°C (32 to 104°F)
- Operating humidity: 8-80% relative humidity non-condensing

ORDERING INFORMATION

TNM-5711

Pearl standalone system - ASI output

TNM-5721

Pearl standalone system – Ethernet output

TNM-5731

Pearl smart data package

HEADQUARTERS

Thomson Worldwide Headquarters 46 Quai A. Le Gallo 92648 Boulogne Cedex FRANCE

PROFESSIONAL SERVICES

Our professional services offerings ensure optimal system performance and maximize uptime. These services include call centers staffed around the clock; system planning, design, and commissioning; professional training courses; and technical maintenance programs and service agreements.

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FINANCING

Financing is available through Thomson financial services. Please contact your products representative for more details.



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