**WBU-ISOG FORUM**

**DAY 1 – Tuesday, November 2, 2010**

**Main Conference Room**
**ASBU Headquarters**
**Tunis, Tunisia**

**SUMMARY NOTES**
**(Draft)**

**Participants:**
Please see the WBU-ISOG Forum Registration List.

**Presentations:**
Copies of the presentations are available through the WBU Secretariat.

**1.0    WELCOME REMARKS**
WBU-ISOG Chair Dick Tauber welcomed participants and thanked both ASBU and Arabsat for their contributions in hosting the Forum meeting. After thanking SES and Newtec for having sponsored the previous evening's Welcome Reception, he turned the meeting over to Dr. Riyadh Najm, President of ASBU, whose opening remarks referenced such topics as the flurry of satellite channels now available in the Arab region and the occurrence/impact of intentional interference. R. Najm also conveyed thanks to the WBU-ISOG Executive, the Secretariat and sister Unions for having brought the WBU-ISOG Forum to the Arab region, and concluded his remarks with best wishes for a successful meeting.

**1.1    APPROVAL OF THE TUNIS FORUM AGENDA**
On a motion from Alan Williams, seconded by David Wood:
**\*\*\*    The Agenda for the Tunis Forum was adopted.**

**1.1.1   WBU-ISOG Executive Elections Notification**
D. Tauber reported that a note would be circulated to the WBU Secretaries General after the Forum meeting to advise that elections are open for the ISOG Executive positions. He noted as well that the current Executive officers (himself as Chair, with Hiroyuki Nasu and Kazimir Bacic as Vice-Chairs) were all available and willing to stand for re-election. The election process will take place by email and is to be completed by the end of December 2010.

**1.2    APPROVAL OF THE SUMMARY NOTES FROM THE NOVEMBER 30-DECEMBER 1, 2009 GENEVA FORUM**
On a motion from Tom Gibbon, seconded by Eddy Frankland:
**\*\*\*    The Summary Notes of the November 30-December 1, 2009 Geneva Forum were approved.**

**1.3    WBU-ISOG PROJECT UPDATES**
**1.3.1   MPEG-4 Interoperability Test: Round 4**
After outlining the history of the Interoperability test program, Tom Gibbon summarized the contents of his email message on October 27th to broadcasters, which had covered such items as: the vendors that had confirmed and/or expressed interest in participating in the next round of MPEG-4 Interoperability testing; and, revised tests that had been suggested by vendors.  He also reviewed the aggressive schedule that would be necessary in order to complete interoperability tests before NAB:

- By November 12, 2010: vendors to return signed participation agreements and to look at modifications to the 28 transport streams used last time (with a view towards shrinking the list);
- November 12-December 1, 2010: Telesat to distribute test materials;
- By December 1, 2010: Final list of transport streams to be determined;
- December 1, 2010 - February 1, 2011: vendors to upload transport streams to Telesat and download streams from other vendors for internal test purposes; and
- March 7-11, 2011: interoperability testing to take place at Telesat in Ottawa.

In addition, T. Gibbon reported that Fox would like to do 8-channel PCM for audio testing and is also asking whether broadcasters and vendors would agree to very low bit rates and very low latency to see how low one can go. He noted, however, that he was not a fan of the latter idea, as it would test the capability of codecs, whereas the objective of the test program is to determine interoperability.

T. Gibbon summarized the next steps, noting that:

\*\*\* **Broadcasters are requested to reply to T. Gibbon's October 27th email by November 5th. If necessary, there will be a teleconference involving vendors and broadcasters to hash out which tests should be performed.**

WBU-ISOG Chair Dick Tauber concluded this Agenda Item by thanking T. Gibbon for his hard work in moving this initiative forward.

### 1.3.2 HD Standards Converters

In his report on the status of WBU-TC's investigation into HD Standards Converters, David Wood outlined intuitive conclusions, the areas that ideally should be examined, and the findings to date (from Tony Caruso and Adi Kouadio), which included the following:

- All converters can lead to artefacts in certain conditions dependent of content type. There is no completely transparent converter yet.
- Motion-compensated converters can be significantly better than fixed interpolation converters for critical content with high motion (e.g., sports).
- Phase correlation motion-compensated converters often outperform block-matching converters, but not always.
- As far as 'basic quality' is concerned, the position of the standards converter is not important.

After outlining additional areas that WBU-TC would like to investigate, D. Wood invited feedback from ISOG Forum attendees, including their views on whether WBU-TC should draft an ITU-R Recommendation proposing that motion-compensated standards conversion should be used for premium content. D. Tauber thanked D. Wood and his colleagues for the presentation and congratulated D. Wood on his election to succeed R. Najm as the Chair of WBU-TC.

\*\*\* **Those with suggestions or feedback regarding WBU-TC's investigation into HD standards converters may forward their comments to D. Wood.**

### 1.3.3 Quality Criteria Requirements for MPEG-4 Digitally Compressed Feeds for both Contribution and International Program Exchange

D. Wood characterized this as being a "progress report" on WBU-TC's investigation into the question of how much video compression should be used for contribution. Among the questions being asked by WBU-TC are:

- What bit rates are "acceptable?"
- What bit rates should be used for ordinary (news) content and for premium (sports) content and what should be the balance between quality and cost? And,
- What is the influence of using MPEG-2 or MPEG-4 AVC?

Answers to some of these questions, he continued, have been arrived at through intuition while other answers had come by way of tests conducted by CBC and EBU. For example:

- T. Caruso's results – Using MPEG-2, adequate basic quality can usually be achieved at 20-30 Mbit/s.
- A. Kouadio's results – Using AVC is useful for both broadcasting and contribution, although the gain is less dramatic for contribution networks.
- Everyone's results – Long GOP makes a lot of difference. There is a big difference in quality between H.264 I-frame and H.264 long GOP.

After providing information about recent tests with JPEG2000 at CBC, D. Wood concluded by outlining some of the topics about which more information is desired, such as the needs of S3D. There was a question from the floor about which frame format to use to get the best results; however, D.

Wood proposed that this question be deferred to a later session during which ASBU would be providing further information. The action arising out of this Agenda item was that:

***     **WBU-ISOG participants may forward questions about the CBC's test results to T. Caruso and may forward their general comments/suggestions to D. Wood.**

**1.3.4     Satellite Interference Initiatives**
D. Tauber advised that Item 1.3.4.4 (Spectrum Issues) would be removed from the Agenda, as the presentation was not available. He noted as well that the order of the remaining items had been juggled, and the session would begin with information on training.

**1.3.4.1** Training Initiative
Jonathan Higgins summarized the history of WBU-ISOG's efforts to educate the satellite user community on proper use of equipment and provided updates on two training initiatives.  The first was the Global VSAT Forum (GVF) online training program, which is endorsed by WBU-ISOG and aims to educate the VSAT installer community. The second was BeaconSeek's Slingpath SNG training program, which aims to improve the education level of those operating SNG terminals, trucks and flyaways. Both SES and Intelsat are supporting this program by buying blocks of seats for customers and their own training purposes. Some 300-400 people have undergone Slingpath training to date, so some headway is being made.  J. Higgins concluded by suggesting that the broadcasting community should take steps to get its house in order to avoid causing unintentional interference, especially in light of the de-skilling of the industry.

In discussion, R. Najm said it may be time for the satellite operators to qualify operators through a training centre or other mechanism that would perhaps assign ID numbers to qualified operators.  J. Higgins agreed this would be helpful, and while it would not be possible for satellite companies to immediately require that all operators be certified, it would be a step in the right direction if a group would step forward and say that in, say, "two years' time" (for example), it would require all those who access its satellite systems to be certified in some way.

In response to a question about control of rogue carriers, Martin Coleman acknowledged there is little to be done other than investing in expensive geo-location techniques to track down the source. He then suggested that efforts should be focused first on the legitimate carriers who cause accidental interference. D. Tauber provided anecdotal information suggesting that a very small percentage of interference incidents are deliberate (0.05% of all RFI events), adding that it would be in WBU-ISOG's interest to make significant inroads on mitigation of accidental interference by applying carrier ID, better training, operator certification, etc.

**1.3.4.2** Carrier ID Update
After urging attendees to read the presentation and supplementary materials posted on the WBU web site about such matters as the three ID Working Groups established by SUIRG (video, VSAT, data only), M. Coleman focused on the fact that despite their having been successful testing of carrier ID back in 2006, four years later he is still trying to get broadcasters to implement carrier ID. He noted that implementation of carrier ID for all broadcast transmissions would make a small but practical difference, and suggested that effective immediately, every RFP for new transmission equipment should state that the equipment must be carrier ID capable. Responsible manufacturers would welcome this, he added, as most have stepped up to the plate already and are either carrier ID ready now, or intend to be ready by Q-1 or Q-2, 2011. He concluded by stating that a worthy goal would be for every video transmission for the 2012 Olympics be required to have carrier ID.

**1.3.4.3** Carrier ID and Certification/Training for WBU-ISOG Distribution
D. Tauber outlined the contents of the Carrier ID and Certification/Training Cover letter being put before the group for review and approval, noting that the objectives he and Rich Wolf (ABC) had established with regard to end users were the adoption of:
- Carrier ID by all video producers, and
- A unified approach for best practices for training, and
- The certification of uplink transmission providers.

He also listed the documents (e.g., WBU-ISOG-SUIRG Carrier ID Spec for Video, Training and Principles for Earth Station Operators, etc.) that accompanied the letter, which was sent to broadcasters and content creators in North America as part of the RF Interference Mitigation effort.

In discussion, M. Coleman noted that it is important to spread the message globally at trade shows, etc. Damon Semprebon said that if organizations such as BBC, CNN and Intelsat would require carrier ID and training, then it would happen immediately. As things stand, he added, many manufacturers are carrier ID ready, but no one cares. M. Coleman said a list would be published through SES of the manufacturers that are carrier ID ready or are working to achieve this.

In response to a question from R. Najm, D. Tauber noted that the Carrier ID specification posted on the WBU web site was a 2010 update of the spec adopted by WBU-ISOG in 2008. He noted as well that the video piece is easy (i.e., a software adjustment) but that the VSAT piece is more of a struggle. There was a brief discussion about the financial impact of satellite interference, which is estimated to cost satellite operators from 1-1.5 million dollars per satellite per year. D. Tauber remarked that despite this, it would still be difficult for satellite operators to turn away customers who are not using carrier ID. R. Najm observed that in many countries, SNGs are licensed by regulators, and suggested it would be beneficial to have regulatory requirements that every licensed SNG must use a pre-determined ID.

D. Wood remarked that the work appears to be more focused at present on the U.S. than the rest of the world, and wondered if the broadcast Unions could be more involved. He also asked whether standardization work was being done in regard to carrier ID. Replying to these questions, M. Coleman noted that:
- Yes, there is a desire to get the Unions more involved; however, efforts to date had centered on getting the technology in place before "going global."
- The carrier ID is not standardized and is not part of the DVB-S2 spec, although it should be.

D. Tauber elaborated on the latter statement, noting there had been several attempts to approach DVB on this issue and that DVB involvement would be welcomed. He also said he liked M. Coleman's goal of having carrier ID on all 2012 Olympic transmissions, adding that it could take a further three years or even longer for full adoption.

It was noted that SES was putting information on its web site on how to upgrade encoders and when to do it, and M. Coleman encouraged other satellite operators to do the same. After referencing the initiatives being undertaken by the Space Data Association, a non-profit group founded by Inmarsat, Intelsat and SES, D. Tauber again encouraged ISOG attendees to read the related documents posted on the WBU web site and to share this material with key personnel back at home base.

Further to the points raised by D. Wood, J. Harding recommended that each Union nominate a specialist to carry forward this initiative within the Unions. R. Najm indicated support for this idea, and suggested they should focus not only on mitigation of accidental interference, but also on such matters as guidelines for dealing with intentional interference. D. Tauber agreed, and proposed that the Union experts work on these issues with ISOG's Rogue Carriers Working Group. J. Harding nominated D. Tauber as NABA's candidate to join the group. D. Tauber accepted, while ABU, ASBU, EBU and OTI all agreed to appoint at least one specialist to join this endeavour. It was suggested that the remaining Unions be advised of this initiative and that all Unions be requested to forward the names of their appointees within three weeks.

**Note:** This issue was revisited the following day, at which time D. Wood proposed language regarding next steps. After a brief discussion, it was unanimously agreed on a motion from T. Gibbon, seconded by R. Morgan, that:

\*\*\* **WBU-ISOG is in favour of satellite interference mitigation and will adopt several measures to take this work forward (e.g., authorization of training courses, support for standardization of a common carrier identification system, appointment of Union representatives to progress work on**

**interference mitigation). The wording of the measures to be taken would be further discussed and then circulated in final form for approval by the ISOG membership.**

1.4    **SATELLITE OPERATORS PANEL**
The session moderator, Alan Williams, introduced the panelists, who were: Bertrand Persehaye (Arabsat); Sabrina Cubbon (AsiaSat); Rhys Morgan (Intelsat); Yo Ikeno (SKY Perfect JSAT Corporation); Eddy Frankland (SES Astra UK); and, Mohamed Youssif (YahLive).

Their presentations covered such items as fleet details, planned launches, coverage, new technologies and services, occasional use services, challenges related to the migration to HD, and pricing. Several of the presentations delved more deeply into a particular area. For example, R. Morgan went into detail on satellite interference initiatives, while E. Frankland focused on Ka, which he characterized as being "the new Ku." Also, M. Youssif shared the results of his company's market research on consumers' perceptions and plans regarding HD in the Middle East.

In discussion, T. Gibbon asked E. Frankland why a large amount of Ka capacity was available. E. Frankland replied that the company had originally envisaged using it for a number of broadband services – both one-way and two-way – and while that has taken up capacity and has enabled the company to move some of the communications services off of the Ku payload, there is still a great deal of capacity left and SES believes it can be used for SNG and OU services.

A. Williams noted that Eutelsat was not present at the WBU-ISOG Forum because Michel Chabrol was dealing with a recent satellite failure. He then asked panelists what kind of contingency one needs to have in place to deal with this sort of situation. S. Cubbon recalled that her company lost AsiaSat3 at launch on Christmas Day in 1997, and had a new satellite built and launched within 15 months. She noted as well that AsiaSat always plans ahead and schedules the launch of replacements well in advance of the EOL (End of Life) projections for the satellite being replaced. E. Frankland echoed the notion that it is crucial to plan ahead. He noted as well that the Astra fleet is fully redundant, and there are plans to have 90% of the entire SES fleet fully redundant.

Several participants remarked on how devastating a satellite failure can be, and general good wishes were extended to Eutelsat. The Agenda item concluded with D. Tauber thanking A. Williams and the panelists for their contributions.

1.5    **ARAB MEDIA LANDSCAPE, CHALLENGES AND OPPORTUNITIES**
The session moderator, Riyadh Najm, delivered the first presentation, ***Major and Rapid Changes of Satellite Broadcasting in the Arab Region***, which was an overview of the Arab media landscape (e.g., drivers fuelling fast growth, channels in the region, satellite operators, regulatory situation, challenges to the introduction of Digital Terrestrial Television, etc.).

In the next presentation, ***Coverage of News & Sports Events***, Bassil Zoubi described ASBU's role in relation to the daily Arabic news exchange and coverage of major events, including the annual Arab Summit and the Olympics. One point noted was that ASBU arranges for the unified Arabic commentary for Olympic coverage and that the commonality of language can be an advantage when covering international events.

In discussion, D. Tauber observed that the organizing committees of certain sporting events seem to be stepping back from negotiating with Unions in favour of negotiating with individual countries, and wondered what the impact would be on ASBU. R. Najm said that a year ago, he would have worried about this; however, the picture looks brighter this year and it seems that rightsholders are coming back to the Unions to negotiate at least a partial package. He noted as well that ASBU has broadcast rights to the Olympics through 2016 and is negotiating for rights to the World Cup (not the next one, but perhaps the one after that).

To further explain ASBU's success in Olympic rights negotiations, B. Zoubi pointed out that the Union's coverage of the 1996 Games had been about 17 hours per day, and that the figure had risen to almost 50 hours a day by 2008. The Olympic IOC, he noted, has recognized the effort made by ASBU and thinks this is very important socially for the Arab countries.

Abdelrahim Suleiman offered the view that although commonality of language may be a blessing when it comes to commentary for the Olympics, it may also be a curse when it comes to acquisition of sports rights for such events as the World Cup. The problem, he said, is that most countries in the world have targeted audiences, while in the Arab region, every broadcaster is broadcasting to the entire Arab world. He also noted that ASBU had lost World Cup rights for 2002, 2006 and 2010, and the rights had been acquired by Pay-TV for enormous fees. He was optimistic, however, that things were now changing, as had been observed by R. Najm.

In addressing **HDTV Introduction & Challenges in the Arab Region**, Ines Gdoura focused on the HDTV landscape and challenges associated with introduction of HDTV in the region. She also described the role and key recommendations of the Arab HDTV Group, which was created by the ASBU General Assembly in 2007 to look at coordination issues regarding HDTV introduction.

In response to a question from T. Gibbon, I. Gdoura noted that the HDTV Group is recommending 720p for production. R. Najm added that the recommendation includes a migration path to 1080p in the future. D. Wood wondered whether certain complements to HDTV, such as Blu-rays in HD, had been considered as measures to help drive the transition. R. Najm pointed out that the biggest problem is lack of public awareness about HD and what it truly entails, adding that ASBU members would be asked to air the promotional clips regarding HDTV that had been referenced by I. Gdoura during her presentation.

In the final presentation, **Arabsat DTH Platform**, Bertrand Persehaye covered such matters as the direct-to-home broadcasting services in Ku-band provided on the three BADR satellites at 26° East for viewers in the MENA region and Europe, and the Digital Bouquet on Arabsat-5A at 30.5° East.

Responding to a query on special rates to encourage HD transmissions, B. Persehaye pointed out that the HDTV special package is offered to everyone in the Arab world. Unfortunately, he added, it is mainly European and Japanese broadcasters who have benefited from the offer. Nevertheless, this special package will remain in place until HD product becomes the norm.

Other questions/comments raised in discussion included the following:

Impact of IP Migration on broadcasting: R. Najm said his personal opinion was that IP will affect traditional broadcasting, but will not take it over any time soon. To illustrate his point, he noted that even in countries with abundant bandwidth for Internet television, the traditional ways of receiving and consuming media still exist.

Lack of HD content: I. Gdoura noted there is a lack of HD content in all program areas in the region except sports, and that low production budgets were the primary reason. R. Najm added that the HD sports coverage was mostly available only through Pay-TV. D. Wood suggested that the broadcast of 35mm films, or even Super 16, might be one way to get more HD content on the satellites.

Delivering media to mobile devices: R. Najm replied to a question on this subject by noting that many mobile operators in the region offer this service; however it is not too popular due to costs. He reported as well that several trials are underway and that a consortium in the UAE has received a license to launch DVB-H as a commercial service sometime in 2011. B. Zoubi observed that standards for this service appear and then disappear, which is impeding the decision to start such services. The younger generation will be a major factor, he added, as they will desert service providers that do not meet their demands.

D. Tauber closed the discussion by thanking R. Najm, the panelists and others who had contributed to an interesting post-lunch session.

**1.6**     **MENOS DEVELOPMENTS**

In setting up this session, the moderator, Abdelrahim Suleiman, described *Life before MENOS*, and explained the many reasons why ASBU had strategically moved to the award-winning MENOS (Multimedia Exchange Network Over Satellite) system.

Next, Mohamed Abdalla provided information about the *ASBU MENOS Deployment*, including a global overview, ASBU Ku and C-band coverage, plus details about value-added services, key features, terminals and how they are suited to various applications, and, service roll-out plans.

The third presentation, *MENOS-FNG and HDTV Contribution*, was given by Simon Pryor, who supplemented his slides with two video demonstrations: one on MENOS-Fast News Gathering and the other on the live HDTV interoperability tests featuring 8 vendors that had just taken place at ASBU HQ on October 30th. S. Pryor was reluctant to go into detail on the test results, as copies of the Test Plan and Test Report were available on site; however, in response to a question, he noted that there was more interoperability at 4:2:0, less at 4:2:2 and even less with the 10-bit tests (in which only a few vendors participated). B. Zoubi provided additional information, noting that at 4:2:0, all decoders were working, but the processing speed varied (i.e., 6 were "okay," and 2 had a slightly slower speed of decoding).

A. Suleiman handled the next presentation, *MENOS Servicing Africa*, which outlined the steps taken to date and future plans in relation to use of the MENOS system to revitalize the AUB's Afrovision news and program exchange. It was noted that the WBU Secretaries and Directors General, as well as the WBU-TC, have expressed support for the project and that the AUB/ASBU/EBU/ITU Steering Committee is asking WBU-ISOG for backing.

The final segment, *MENOS Global*, was presented by Serge Van Herck, President of Newtec, who highlighted the 2015 Vision of providing a solution (MENOS Hybrid satellite/terrestrial concept plus the MENOS Box, which is a global footprint extender) that would enable broadcasters all over the world to have inter-connection with the MENOS system so that Arab content can move easily to the rest of the world, and the other way around as well.

Responding to a question from D. Wood, S. Van Herck confirmed that a team is investigating the way to utilize cloud computing and optimize it for terrestrial and satellite; however, there are no answers yet on how to proceed.

M. Coleman asked whether carrier ID was included in the roadmap for the product. In reply, S. Van Herck noted that Newtec would be introducing carrier ID on all of its modulators starting in Q-2, 2011; however, there is no retroactivity for existing equipment in the field. M. Coleman explained that the inability to provide backwards-compatibility for carrier ID is a technology issue with modulators. The new breed can have ID added, he noted, but the technology on old modulators cannot support it.

When asked to elaborate on the way in which MENOS is able to save bandwidth, S. Van Herck said it was due to the mix of technologies, modulation, coding and architecture. A. Suleiman noted that bandwidth is also saved by using archiving and store-and-forward to exchange recorded materials.

Referring to efforts to expand MENOS into a global system, R. Najm asked Intelsat and SES Astra whether they would be willing to work with ASBU to see if their networks can be linked together on a practical level. R. Morgan and E. Frankland both indicated a willingness to consider this.

WBU-ISOG Chair Dick Tauber wondered what specific action ISOG was requested to take in regard to revitalization of the news and program exchange in Africa, and it was agreed that D. Wood would draft some language proposing next steps. In closing the session, A. Suleiman thanked the panelists and emphasized the roles that Arabsat and Newtec had played in making MENOS such a success. He

also thanked WBU-ISOG for having given ASBU the opportunity to share information about its activities and vision for the future.

**Note**: The following day, D. Wood shared his proposed language regarding next steps for ISOG support of efforts to revitalize the Afrovision exchange network. The language referenced support by the Unions, and A. Suleiman suggested a revision to indicate that other ISOG attendees also support these efforts. There was a decision to massage the language off-line and it was unanimously agreed on a motion from A. Williams, seconded by R. Najm, that:

\*\*\*     **WBU-ISOG confirmed its intent to support the Afrovision project being led by ASBU. The appropriate language outlining what this entails would be circulated and approved formally at a later date. (DONE, see attached)**

**<u>CLOSE OF DAY ONE</u>**
WBU-ISOG Chair Dick Tauber closed Day One of the Forum with thanks to ASBU as well as all of the contributors who had participated in the day's proceedings.

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