

Internet Streaming Media Alliance (ISMA)

Summary of Survey of Individuals Requesting ISMA Specifications

Public Version

September 24, 2007

Note: The full survey report is available to ISMA members only. If your company is an ISMA member, please contact Mary Litynski (marylit@isma.tv) for the expanded report.



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Executive Summary

Between October 1, 2004 and June 30, 2007, ISMA (Internet Streaming Media Alliance) received over 4,300 requests for its technical specifications. However, there has been little, if any, feedback from most of the requesting companies to determine if the specifications have been implemented or to identify issues relating to the work.

We know that ISMA specifications are being propagated worldwide and are being used in a significant number of deployments. A Web search for “ISMA” produces links to hundreds of products that claim to be ISMA-compatible. We also have heard reports of customers requiring ISMA-compatible products when considering system choices for large deployments, among other antidotal feedback at our Forums. In addition, through ongoing ISMA liaison efforts, the specifications are being incorporated into popular international standards, such as the digital broadcasting DVB-H standard and in work from the OMA, the Open Mobile Alliance.

However, without impartial data it has been difficult to determine the breath and influence of ISMA efforts, especially in the emerging IPTV market. So an important rationale for this survey was to understand if, and at what level, the members’ time and energy have produced valuable industry contributions that have been incorporated into existing or planned products.

ISMA is a nonprofit trade association promoting the adoption of open standards for IP video and dedicated to the industry’s growth and development. Specific data on the use of ISMA specifications was considered vital in assessing the organization’s mission and identifying new areas of work needed to support industry growth. Consequently, the ISMA Board of Directors authorized a query of individuals who have received its specifications and have real-world experience with its work. The results of this survey will contribute to the association’s understanding of the industry’s needs and expectations.

This survey is also valuable because it provides a measured insight into the general status of the industry worldwide, especially since only 10% of the responses came from ISMA members. ISMA specifications are used in IPTV deployments and this survey data therefore provides a glimpse into the activities of the IPTV industry as a whole, especially that segment interested in sustaining open standards.

Specifically, the Alliance organized the questions in this survey to:

- Determine how and where ISMA specifications are being used.
- Provide feedback on the validity or any issues relating to existing ISMA specifications.
- Offer insight into future work that is needed to support the development of open standard IP video and IPTV ecosystems.
- Provide a geographical overview of where companies are located that are using, or plan to use, ISMA specifications.

As a service to the industry, ISMA is making a portion of this survey available to the general public in this summary. A more detailed report with analysis of the entire results, including information on future IPTV open standard development trends, is available to ISMA members only. Members can request the entire report by contacting ISMA Executive Director Mary Litynski at marylit@ISMA.tv or calling the office at +1.415.561.6276 .

Highlights

The feedback from companies that have requested the ISMA specifications in this survey has provided vital data that will contribute to the organization's future direction. Among the conclusions to be drawn from this data:

- ISMA specifications are successfully implemented into products at very high conversion rates – Over two-thirds of respondents said they either had implemented an ISMA specification in their product or plan to do so. This correlates with the original intention of those who requested the specifications and indicates that ISMA work is meeting the industry's expectations and is technically viable.
- ISMA is technology-focused – Over two-thirds of the ISMA specifications were requested by product development or engineering staff with the intention of implementing it in a product or system. A few requests were for teaching or educational purposes only, and others wanted to stay abreast of the latest industry developments.
- ISMA influence is international – The geographical distribution of ISMA specifications is consistent with the expected deployment of IPTV systems, with the largest share in Europe, followed by Asia and then North America. This indicates the specifications are being used in developing the latest IPTV products and installations.
- ISMA is seen as a source for open standards – The IPTV industry strongly supports open standards with over 80% of those who have implemented ISMA specifications citing "open standard" as one of the reasons behind their decision.
- ISMA is a leader in open DRM specifications – Both ISMACryp 1.0 and the newer ISMACryp 1.1 have gained significant adoption.

About ISMA

Founded in 2000, ISMA (www.ISMA.tv) is a global alliance of industry leaders dedicated to the adoption and deployment of open standards for streaming rich media such as video, audio and associated data over Internet protocols. It promotes standards-based IPTV solutions that offer greater choice, flexibility, extensive cost efficiencies and higher quality of service. ISMA provides the industry with technical specifications based on non-proprietary and existing standards, sponsors opportunities for confidential product testing that enable multi-vendor, multi-platform interoperability, and manages a product conformance program. ISMA collaborates with other trade associations and standards bodies to promote interoperable solutions across the entire content delivery spectrum.

Although there is a continuous stream of work in progress, at this point ISMA has completed several specifications affecting IP video and IPTV applications. These include:

- ISMA 2.0 (interoperable IP video and audio framework; released April 2005)
- ISMA 1.0 (interoperable IP video and audio framework; released August 2001)
- ISMACryp 1.1 (end-to-end content encryption; released September 2006)
- ISMACryp 1.0 (end-to-end content encryption; released February 2004)
- ISMA Closed Captioning (released April 2005)

Other areas of work-in-progress include fast channel change, IP video advertising insertion and trick modes, among other specifications and procedural white papers. ISMACryp 2.0 (codec-agnostic end-to-end content encryption) is due to be released September 2007. However, this survey only dealt with completed specifications that have been through a public review period, technically reconciled with the feedback, and then released as final versions for industry download. There was no cost associated in accessing these ISMA specifications.

Survey Process:

On July 12, 2007 an email was sent to 4,322 individuals who had requested ISMA specifications during the past 32 months asking them to complete a short online survey. The number of individuals receiving the email was the result of eliminating duplicate email addresses from the overall population of more than 4,700 requests. The survey, which included 10 to 12 questions depending on whether or not the respondent's company had implemented the specification, was prepared by ISMA staff and its Board of Directors.

Participants were allowed a little over two weeks to complete the Web-based form. By the July 27 deadline, 320 survey responses were received and are counted in the following results. The 320 responses equal a 7.4% response rate, which is considered excellent and exceeded expectations. From our review, the 320 responses aggregated in this report are from independent companies or separate entities within large multi-global organizations.

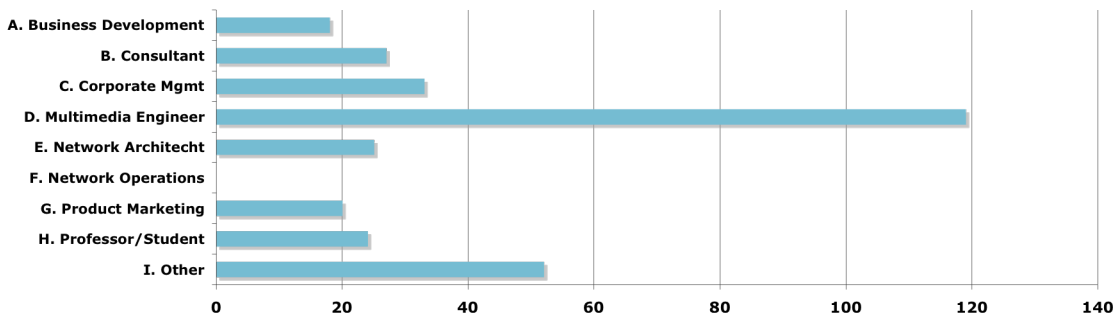
A small incentive was offered to those invited to take the survey with a chance to have their email address entered into a drawing for an engraved iPod. This incentive probably contributed to the high response rate, but it is also clear that ISMA is well respected – that is, if ISMA did not have a strong brand presence such a large sampling would have been unlikely. The response rate itself is a strong affirmation of the Alliance and, by association, its membership.

Responses to Selected Questions

1. *Please select the one title that best describes your responsibilities in your company or organization.*

From all the responses, 99.4% answered this question. “Multimedia Engineer” was the most selected response to this question (37%). The category of “other” varied, but the majority of the titles associated with the 52 “other” responses were technical or development-related in nature. Business development and marketing professionals represented only 12% of the respondents, indicating that the specifications were requested mostly by those in an engineering and product implementation field.

Figure #1: Q1. Please select the one title that best describes your responsibilities.



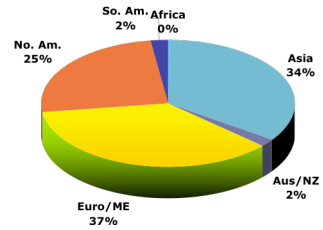
2. *What is the size of your entire company or organization?*

The responses to this question were bi-modal – 29% of the respondents were from organizations with greater than 5,000 people, the largest organization size defined in the survey, and 28% stated that they were from organizations with less than 50 people, the smallest size option in the survey. Combined, these two extremes represented a majority of the responses. Interestingly, we can also look at this distribution as roughly split between those with less than 500 people (52%) and those with more than 500 (48%). There was a 99.4% response rate to this question.

3. Region

There was a 99.4% response rate to this question, representing 34 countries. Overall, Europe accounted for 37% of the responses and Asia 34%, compared to 25% for North America. This seems to be consistent with other industry research.

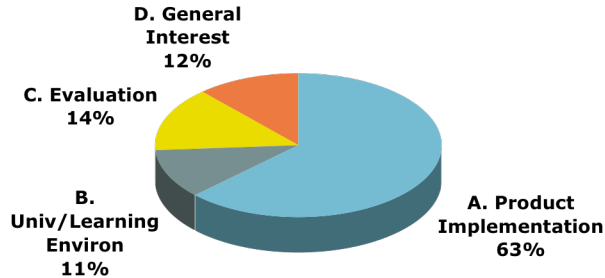
Figure #3: Q3. Country (Respondents by Region)



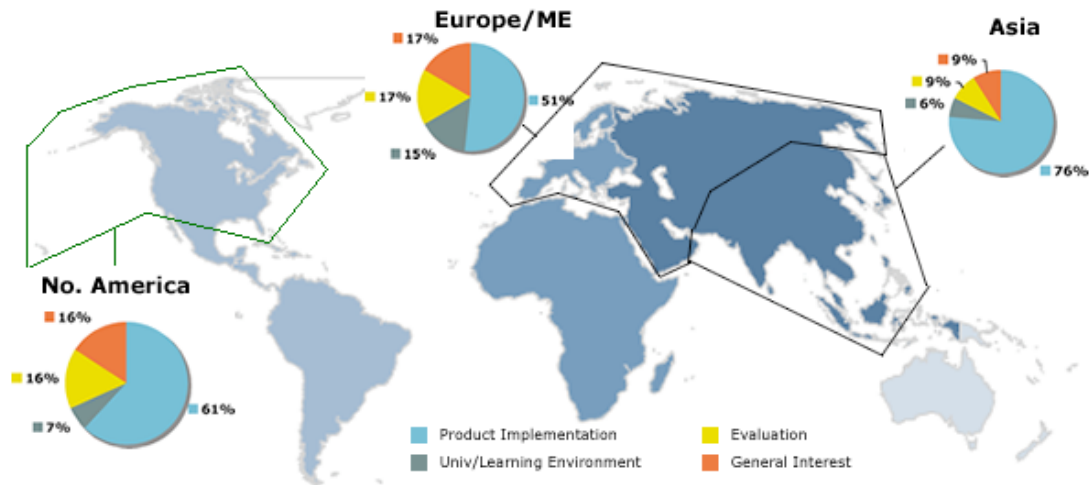
4. What is your interest in the ISMA specifications?

Nearly two-thirds of the respondents were interested in ISMA specifications for product implementation reasons. From among those who returned the survey, there was a response rate to this question of 99.7%.

Figure #4: Q4. What is your interest in ISMA Specs?



The following graphic displays how the responses to Question 4 were answered by region of the world. This shows that in Europe about half of the interest in ISMA specifications were for “product implementation” whereas in Asia this interest rose to three-quarters; in North America planned implementation interest was just over 60%.



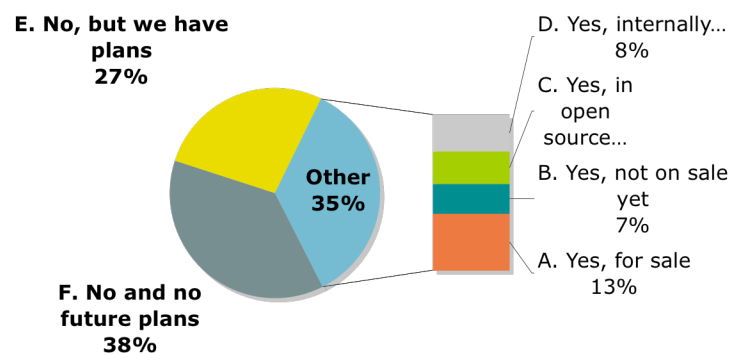
5. Has your company / organization implemented any of the ISMA specifications?

There was a 97.5% response rate to this question. The question provided six response options with an additional field for respondents to input further descriptions in their own words. The six responses were grouped into four variants of “Yes” and two variants of “No.”

- A. Yes, in a product currently for sale.
- B. Yes, in a product not for sale yet (please enter expected release date below).
- C. Yes, in open source or other non-product public ways.
- D. Yes, internally within our organization.
- E. No, but we have plans to (please describe below).
- F. No, and we have no plans to.

Figure #5 displays the results for this question for each of the 6 response options.

Figure #5: Q5. Has your organization implemented an ISMA Spec?



“Yes” choices A-D accounted for 35% of the responses and an additional 27% stated they have “plans to implement in the future” (Response E). These categories combined equal 62%, which is concurrent with Question 4 where 63% of the respondents stated their interest in ISMA specifications was for “product implementation.”

Based on this analysis, it seems the specifications are meeting the market’s expectations, as almost an equal percentage of companies that requested the specifications for product implementation purposes also reported using the specification in some type of deployment. This would seem to indicate the specifications are technically adaptable to various product design schemes.

Of the 14 respondents that completed the comments field describing the expected release dates for future products (Response B), 11 indicated the products would be launched sometime between the fall of 2007 and late 2008. The other three did not include a timeline. Among the 54 comments from those who indicated future ISMA plans, the implementations covered various aspects of IPTV deployments, including set-top boxes, mobile TV and video on demand applications.

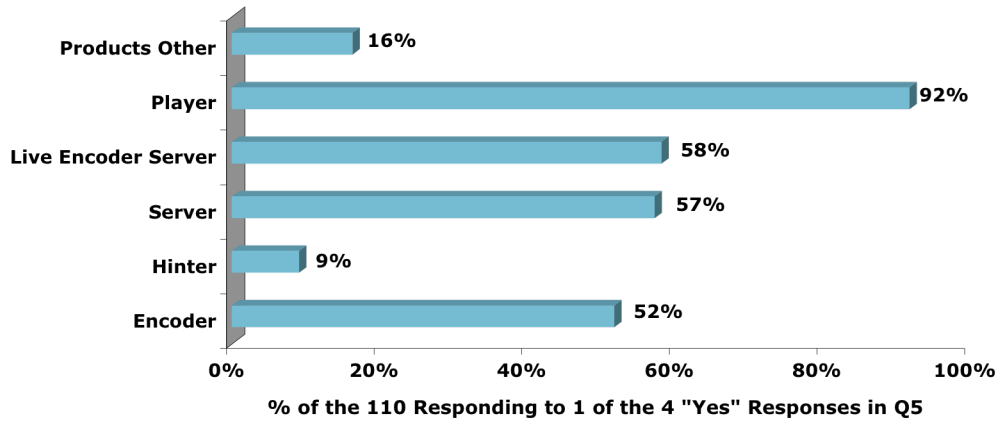
Even among those who selected “No” as the answer to this question, several of the comments indicated the companies are still evaluating the specifications or they are still uncertain if they will incorporate them into a product design. Others are not involved in the product development process.

NOTE: Respondents who answered “Yes” (Responses A-D) to Question 5 as using one or more ISMA specifications were directed to Question 6. Those who answered “No” (Responses E or F), were directed to skip Question 6 and proceed to Question 7. Therefore, the results of Questions 6a through 6c are based only on responses from organizations that either are using or plan to implement an ISMA specification.

6a. We have implemented ISMA specifications into the following types of products (list all that apply)

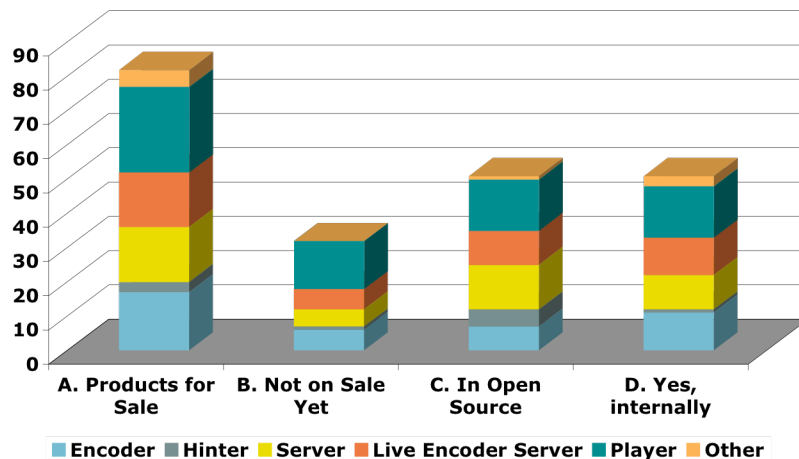
Figure #6a below displays the frequency of product type selections made by the 35% who selected choices A, B, C or D, the “yes” responses, to question number 5.

Figure #6a: Q6a. ISMA Specs Implemented by Product Types & Status



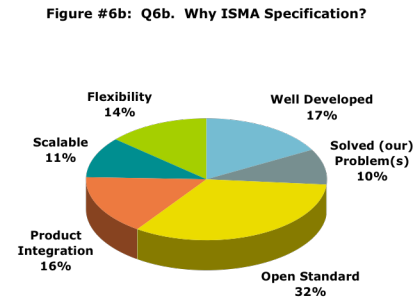
For a better understanding of the status of these products, Figure #6a' further defines the product types as broken down by the “Yes” options (A-D) to question number 5, indicating the status of the product.

Figure #6a': Q6a. ISMA Specs Implemented into Product Types



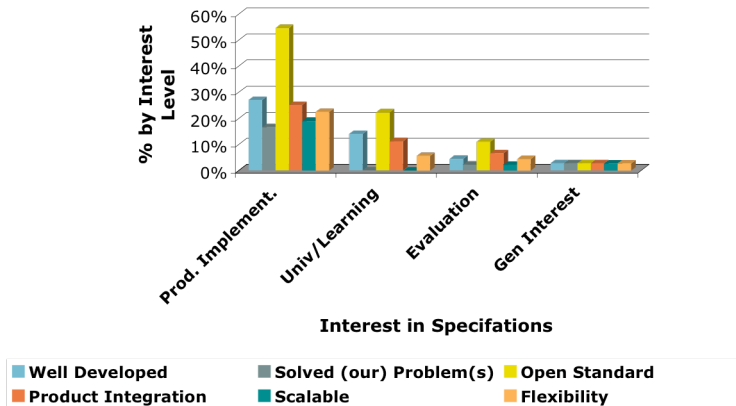
6b. We implemented an ISMA specification into our products because (please check all that apply).

There were 149 respondents to this question, which is 135% of those indicating in Question 5 that they have implemented an ISMA specification into a product of some sort (Responses A – D); this simply reflects the fact that 39 respondents who answered either E or F to Question 5 also responded to this question. Figure #6b displays the reasons respondents selected an ISMA specification as a percentage of the 149 who responded to this question.



“Open Standard” stands out as the most compelling reason for all interest level groups. As shown in Figure #6b’ below, in the case of those interested in ISMA specifications for product development, “Open Standard” was selected twice as often (55% of the responses) as the second most selected response, “Well Developed” (27% of the responses). In the case of University/Learning Environments, “Open Standard” was selected almost twice as often as “Well Developed” (22% vs. 14%). Even in the case of those selecting ISMA specifications for evaluation purposes, their interest was driven more by “Open Standard” (11%) than “Product Integration” (7%).

Figure #6b’: 6b. Why ISMA Specification x Interest Level



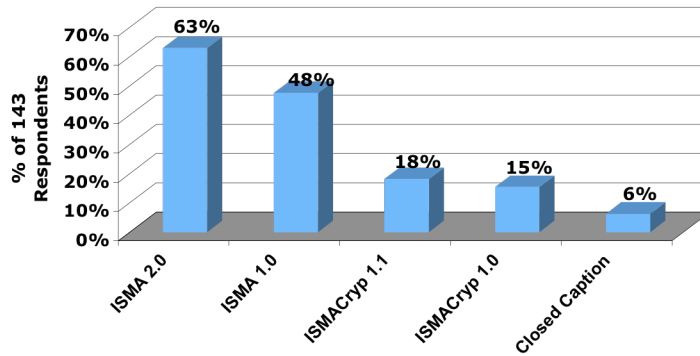
Based on “write-in comments,” it also appears that part of the drive to implement ISMA specifications is coming from customer demand. These comments were included in the response to this question:

- *At telecom operator request*
- *Customers are pushing for a test solution incorporating ISMA*
- *System integrator (SI) video server is specific ISMA protocol*

6c. We have implemented the following ISMA specifications into our products

Multiple responses were allowed to this question with 45% of the respondents answering this question. Figure #6c below displays the ISMA approved specifications that the respondents stated were used in product implementation.

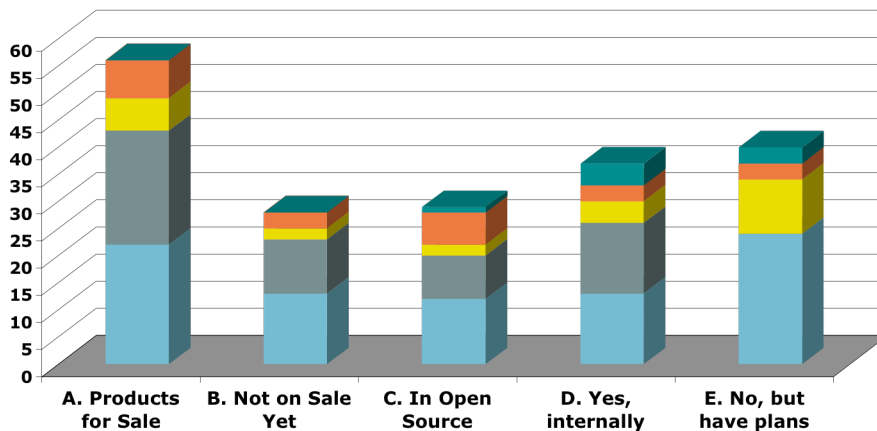
Figure #6c: Q6c. Proportion of ISMA Spec Implementations



ISMA 1.0 was initially released in 2001 followed by the current industry release of 2.0 in April 2005. In the past two years adoption of ISMA 2.0 has surpassed existing implementations of the first ISMA version. ISMACryp 1.0, which was finalized in 2004, provides content encryption for both stored and transmitted video. ISMACryp 1.1, released in 2006, extends this end-to-end encryption to ISMA 2.0 and popular codecs and is currently used mostly for mobile IPTV applications. Implementations of ISMACryp 1.1 slightly exceed implementations of ISMACryp 1.0 (18% vs. 15%).

Figure #6c' below displays the frequency of responses citing which ISMA specifications were implemented in products and the status of the products as stated in Question 5.

Figure #6c': Q6c. Frequency ISMA Specs Implemented in Products



As noted, ISMA 1.0 and 2.0 are the most referenced specifications in products currently for sale as the initial specification has been available for over two years and it has the broadest adoption. Combined, ISMA 1.0 and 2.0 accounted for more than 80% of products either currently on sale or planned. ISMACryp 1.0 and 1.1 also scored well, possibly because the specification is referenced in the DVB-H standard for mobile digital broadcasting. These were referenced in 25% of the total responses. The 4% usage for the Closed Caption specification is to be expected, given the limited application for this work. However, it adds an important element to the overall scheme of the ISMA work.

7. We decided not to implement the ISMA specification because (please check all that apply).

Question 7 was only directed to the 37% of respondents who indicated they had not implemented or did not plan to implement an ISMA specification. Of the 92 respondents to this question, 47% said they had

not used it in a product or service because the work was not applicable to their needs. This may have resulted from a general misunderstanding of the initial scope of the requested specification or other technical factors. Technical capability does not seem to be issue. Only 14% of the responses either referenced “technical issues” or that it “did not address the issue” as the reason the ISMA specification was not used.

The decision to use privately-developed solutions also seemed to be equally important in determining not to use an ISMA specification with 47% of the respondents indicating they either developed their own in-house solution or used a proprietary solution. This represents only 13% of the entire 320 who responded to this survey.

From the 24 comments relating to this question, we know that four respondents requested the specification for educational purposes only with no product implementation intent. Another three respondents are waiting for customers to request ISMA-compliant products before they implement the specification. Only two respondents indicated they had selected standards from ATIS IIF or other organizations over the ISMA work.

Conclusion

The specifications and procedural white papers developed by ISMA over the last seven years have been well-received by an industry hungry for open standard solutions in implementing IPTV products and systems. IPTV is a global market and, in addition to addressing the issue of open standards, ISMA is reaching the important world markets where the industry is growing and developing the fastest.

The organization’s work has seen very high rates of conversion, with two-thirds of the organizations that have requested an ISMA specification over the last few years incorporating the specification into a current or planned product. This reflects a strong demand within the industry for open standards applicable to developing IPTV products and system deployments. Almost a third of the respondents who have implemented an ISMA specification indicated that they chose the ISMA solution because it was an open standard.

This high rate of conversion also indicates that ISMA specifications are influencing engineers worldwide, a hard-to-reach yet crucial community of the professionals who are designing and building the products that will create the next new market. Of those who requested the specifications, only 20% were not engineers. Interestingly, the breakdown of engineers was almost equal between Europe (37%), Asia (34%) and North America (25%). The high implementation rate also reflects the quality of the specification and the need for the specific work the organization is addressing

Looking at the specification requests and comments returned with the survey, it also is clear that ISMA is a leader in providing open DRM (Digital Rights Management) specifications. This is consistent with other input to the organization, which finds that both ISMACryp 1.0 and the recent ISMACryp 2.0 specifications have been experiencing significant adoption rates.

Given the importance of ISMA work as outlined in this survey, it is becoming increasingly urgent that the industry must now provide the necessary support and participation in ISMA to ensure that the work continues. ISMA is organized to respond rapidly to industry needs. As IPTV and other IP video markets continue to materialize and systems are deployed, the 90% of non-member companies using ISMA specifications need to come to the table and join forces to ensure the work continues in a healthy and robust environment. For information on joining ISMA, contact ISMA Executive Director Mary Litynski at marylit@ISMA.tv or visit http://www.ISMA.tv/about_isma/roster.html.