To: TC 46/SC 9 Members & Liaisons
From: Todd Carpenter, Secretary TC46/SC 9
RE: 2011 Plenary Resolution #8 on EIDR/ISAN/DOI
April 10, 2012

During the 2011 plenary meeting of TC46/SC9, a topic arose during the presentation of the ISAN-IA Registration Authority Report regarding the Entertainment Identifier Registry (EIDR). That report had been received by the Secretariat and distributed to the membership on May 3, 2011, the day before the SC 9 Plenary meeting was held.

The following Resolution was adopted by SC 9 (Reference: ISO TC46/SC9/N619):

Resolution 8. SC9 notes the issue raised by ISNI-IA (N607) regarding the confusion created in the Audio-Visual market faced with two competing identifiers. This confusion arises from the collision of the non-ISO EIDR coupled with DOI and ISAN. SC9 expresses its deepest concern that the scope limitation expressed in the DOI FDIS is apparently not respected. SC9 asks that IDF propose measures that address this issue.

A response from the International DOI Foundation (IDF) was requested by the Secretary to provide background information and describe from IDF's perspective the timing and relationship between EIDR, DOI, and IDF. That report was received on May 13, 2011 and is included with this memo.

Subsequent conversations with EIDR representatives, IDF, and the ISAN-IA have taken place over the ensuing months. A summary of those discussions is below.

The Secretary has encouraged all parties in this discussion to engage in constructive dialogue to address their concerns.

Summary of discussions:
While not stating a position on the validity of any particular position, here is a report from my perspective of the conversations and the concerns. Members can judge for themselves the implications of this information.

From ISAN-IA’s perspective, in particular, there appears to be an overlap in the scope and goals of EIDR and its partnership with the IDF. The concerns were outlined in their report for the 2011 Sydney meeting distributed to the membership of SC9. (Reference: ISO TC46/SC9/N607) In addition, the 2012 annual report from the ISAN-IA further outlines their positions and concerns. (Reference: ISO TC46/SC9/N654)

The scope of DOI (ISO 26234, publication forthcoming) had been a topic of significant debate in 2009 and 2010. These issues were resolved to the
subcommittee’s satisfaction evidenced by the complete absence of negative votes on
the final FDIS balloting of the DOI standard. (Reference: ISO/TC46/SC9/N581) The
DOI standard is quite explicit in the terms and approach that should be undertaken.

“The DOI name does not replace, nor is it an alternative for, an identifier used
in another scheme, such as the schemes defined by ISO/TC 46/SC 9. This
International Standard describes how the DOI system can be used in
conjunction with another identifier scheme (for example, to provide additional
functionality, such as resolution, where this is not already available), and how
the character string of that other scheme can be integrated into the DOI system
through the DOI metadata record and/or the DOI syntax.”

(ISO/FDIS 26324:2010(E) Section 1: Scope)

There seems to be a larger issue from the industry’s perspective on both the
granularity and functionality of the ISAN system that is the crux of the discussion.
There is an apparent need for identification and resolution functionality at a more
granular level than is currently provided by the current ISAN system. It is possible
that the V-ISAN system could support the necessary granularity, although the
resolution functionality that was envisaged years ago has yet to be deployed. It
should be noted that the community members did approach ISAN several years ago
with proposed extensions to the ISAN system, which were not adopted. The EIDR
system is the community response to the noted challenges when the ISAN extension
alternative was not an option. The success and buy-in that EIDR seems to be
gathering within the movie and television communities, particularly in the US, but in
other areas as well, appears to be evidence that the more granular identifier was a
genuine need. A different response from ISAN-IA to these industry needs and
concerns might have preempted the formation of EIDR.

The timing of the partnership between EIDR and DOI was troubling to participants
of the SC 9 plenary because of the apparent closeness in timing between the
resolution of the TC 46 Appeal on the question of the scope of DOI. Unfortunately
the late distribution of the 2011 ISAN report precluded the IDF or any others
involved in the EDIR from providing their position in advance of the meeting and
the resulting discussion was weighted towards the perspective of the ISAN-IA.

To be fair to IDF, the EIDR community initiated the use of the DOI system, not vice
versa. At the time, the DOI was—and remains—a publicly available U.S. ANSI/NISO
standard and is free to be used by any individual or organization for persistent
identification, alone or in conjunction with any other identifier. At the time of the
initial conversations between IDF and EIDR, the IDF was (and remains) free to work
with any organization that wishes its support in using the DOI for their needs.
Actions taken by the Secretariat

- All of the Registration Authorities (RAs) will be instructed to provide an annual report of their activities one month prior to the start of the plenary meeting. (This has already been done for the 2012 Berlin meeting.) Any reports not received by that time will not be distributed or discussed at the meeting. This will ensure that the membership of SC 9 receives these reports in a sufficiently timely fashion to be reviewed prior to the meetings and allow members to prepare for any ensuing discussions. Any RA not submitting a report by the deadline will be reported to ISO CS as failing in one aspect of their contractual responsibility.

- As noted in Resolution #8, the Secretary requested a report from the IDF addressing the issue. This was promptly provided (see attached).

- A series of teleconferences with Regis Flad (ISAN-IA), Norman Paskin (IDF), and Kip Welch, President/Chairman, (EIDR) were held to further discuss the concerns of ISAN-IA.

- Additional discussions were held between ISAN-IA and EIDR about technical interoperability, mappings, and business-level integration (registration costs, etc). In the opinion of the Secretary, these integrations should be encouraged, but they are outside the direct scope of SC9.

- A representative of EIDR has been invited by the Secretary and accredited by the U.S. delegation to attend the plenary meeting of SC9 in Berlin to provide their perspective on this issue and answer any questions the membership may have.
Response statement re ISO resolution

This is a response by The International DOI Foundation (IDF) to SC9 Resolution 8: “SC9 notes the issue raised by ISNI-IA (N607) regarding the confusion created in the Audio-Visual market faced with two competing identifiers. This confusion arises from the collision of the non-ISO EIDR coupled with DOI and the ISAN. SC9 expresses its deepest concern that the scope limitation expressed in the DOI FDIS is apparently not respected. SC9 asks that IDF propose measures that address this issue.” EIDR concur with this response.

Response

- EIDR and IDF are independent organisations.
- EIDR is a commercial application of DOI.
- EIDR rejected the use of ISAN as its primary identifier during the development of its system.
- EIDR selected the DOI as a match for its requirements for the primary identifier and approached the IDF to use the DOI.
- ISAN-IA rejected the proposal to construct a recommended way of expressing the use of ISAN in DOI, allowed for in ISO 26324.
  - We now understand that following discussions between EIDR and ISAN-IA, this is a renewed possibility for assets identified by ISAN; IDF continues to welcome this.
- The IDF enabled the EIDR to use an ISO identifier scheme; the alternative was not the ISAN, but a non-ISO identifier scheme.
- ISANs may already be referenced within EIDR as existing identifiers where applicable.
- Reference to “competing identifiers” is misleading and ignores the detailed work on this issue presented repeatedly to SC9. The two systems have different requirements and are not interchangeable.
- The use of DOI in EIDR conforms to all the requirements of ISO 26324.
- The claim made in the resolution is false on both technical standard conformance and commercial application grounds.
- EIDR and ISAN-IA have been discussing market co-operation issues since before the resolution and continue to do so.
Supplementary information regarding response statement by IDF

**History**

- EIDR ([www.eidr.org](http://www.eidr.org)) was developed independently of the IDF by major players in the entertainment supply chain.
- EIDR identified during its development phase the need for an actionable identifier with significant open functionality; it rejected ISAN and recommended the Handle System, and its associated registry functionalities, as the technical basis for its identifiers. The Handle System is also used by DOI; this led to a consideration of using DOI.
- Movielabs (developing EIDR on behalf of its major studio constituents) approached IDF, the governance body of the DOI system, in June 2008 for initial exploratory discussions re becoming a DOI user and using DOI in the registry it was proposing for Entertainment Industry assets. These discussions were on condition that they were covered by a commercial confidentiality agreement. After extensive discussion, Movielabs developed a detailed proposal to the IDF for DOI use in Dec 2010.
- As part of this discussion, IDF asked EIDR if ISAN or other identifiers existed which covered some of the same content referents, as these might form a basis for creating DOI names (e.g. in the same way as ISBNs can be used in DOI). EIDR asked IDF what was its position if such another identifier existed which identified (some of) the same referents, though noted that their metadata and applications would be significantly different from that of existing systems.
- IDF explained that in the case of ISO identifier schemes this was dealt with in the (then draft) ISO standard by allowing each ISO identifier to make its own choice; for example, the identifier could be incorporated into the DOI syntax (as with ISBN and ISSN) or the DOI metadata (as requested by ISRC), if that was agreed as suitable; each ISO authority had its own responsibility as to which course was taken.
- EIDR asked what mechanism, if any, had been agreed between DOI and ISAN. IDF had to inform EIDR that ISAN was the only one of the SC9 identifiers which had specifically rejected exercising any mechanism for the interoperation of its identifiers with DOI (statement made by then ISAN-IA director Patrick Attallah, minuted in the ISO WG minutes), so IDF were unable to provide such a mechanism/specification. IDF therefore advised EIDR to see if ISAN would be willing to re-consider some form of interoperability, in view of this real application case.
- At the final IDF WG meeting (April 2010), Regis Flad (now ISAN-IA following Attallah’s departure) participated and agreed with the final drafted ISO standard (FDIS) wording in all aspects. NP was bound by the commercial confidentiality agreement with EIDR and could not mention EIDR itself, but specifically again asked ISAN (Regis Flad) if they were now willing to reconsider interoperability mechanisms of ISAN and DOI: he stated that they would “have to think about it” but we heard nothing further.
- EIDR is solely responsible for its commercial decisions; IDF is responsible only for the technical standard for the DOI.
- Both IDF and EIDR remain willing to discuss interoperability with ISAN-IA; EIDR has already been discussing technical and business interoperability with ISAN, prior to this resolution.
**EIDR’s use of identifiers**

EIDR rejected ISAN as a solution for its application for technical reasons. EIDR was created as a commercial supply chain management and distribution tracking tool. A core requirement for EIDR is to uniquely identify products in commercial distribution, not just intellectual property. That includes being able to identify a complete family of related commercial objects down to the level of granularity required for clips that might be distributed on YouTube, differently encoded mezzanine files for delivery to distribution channels, and differently encoded consumer files created for download, rental, or streaming delivery. Given the many legacy systems used in the movie/TV ecosystem, it was also extremely important to have broad cross-referencing and alternate ID support to keep supply chains functioning without disrupting current business systems. Adapting ISAN to serve the commercial purposes of EIDR would have required years of work and wholesale changes to technical specifications and infrastructure, ISAN governance & business models, and ISAN terms of use. EIDR needed a solution within months, not years.

EIDR selected DOI not because it was an ISO standard, but because of its functionality: EIDR seeks to support all identifiers which are accepted tools in the content world and in use among its communities, whether formal or de facto standards or proprietary. It selected DOI because it is already a widely accepted tool with significant functionality; able to map to other identifier schemes; an implementation of the Handle System; has an active development program; and has existing resolution tools through a standard web proxy, with enhancement to cover multiple resolution types. The underlying technology platform (DO repository, handle system, mirroring, etc.) was also a factor as it is well tested in multiple applications, easy to modify, with a pool of existing developer experience. The EIDR schema and API have explicit support for ISO identifiers, other standard identifiers, and proprietary identifiers, and EIDR members are allowed to (and have) proposed new ones; private proprietary IDs are also supported. The DOI System makes this interoperability easy to explain, and real interoperability of identifiers is a primary commercial driver for some of EIDR’s founding members.

Had IDF not responded to EIDR and given advice on network resolution and metadata structuring issues, EIDR would have proceeded with a non-ISO solution, not ISAN. EIDR had commercial market needs to be met in a matter of months, not years. ISO SC9 does not have the authority to dictate which commercial applications should use which identifier.

**Scope statement of DOI System standard**

The resolution’s claim of “the collision of the non-ISO EIDR coupled with DOI and the ISAN” is misleading. (1) EIDR is an application of the ISO-standard DOI. (2) If the phrase is meant to be read as “a referent has both an ISAN and a DOI (EIDR)”, this is true but trivial, and allowed by the standard: many referents have multiple identifiers. “The scope of the DOI system is not defined by reference to the type of content (format, etc.) of the referent, but by reference to the functionalities it provides and the context of use”. (ISO 26324 FDIS, Introduction)

Standard 5.1 (and repeated in Annex A): “A DOI name shall not be used as a replacement for...”. In Annex A, the examples give an example of this “non-replacement” in action: “Example 3:
• The identifier string 10.97812345/99990 is a DOI name; it cannot be
validly submitted to an ISBN point-of-sale ordering system, or converted to a GS1 bar code for use as an ISBN bar code; it does not conform to the ISBN syntax.
• The identifier string 978-12345-99990 is an ISBN. It cannot be validly submitted to a DOI resolution service; it does not conform to the DOI syntax.
• However both strings have the same referent.”

Similar considerations apply in the case for EIDR and ISAN: an ISAN does not carry metadata sufficient for use in EIDR, and is not a valid string for use in EIDR; an EIDR DOI cannot be submitted to the ISAN database, etc. They are not fungible, although the two systems have a place in the same market.

“Overlap”/”Collision”

The use of the phrase “overlap of identifiers” is used in the covering e mail and in the discussion that took place on the Resolution. As we have pointed out repeatedly at SC9 meetings and copiously in documentation, such a phrase is ambiguous and therefore ultimately meaningless or misleading unless expanded: does it mean “two identifiers with the same referent” or “two identifiers with the same functionality”? The DOI WG spent a vast amount of time and painstaking effort on this issue, and it is regrettable that the conclusions have not been apparently been appreciated in the discussion.

Use of ISO identifier schemes

IDF should be thanked for bringing a major commercial application into the ISO fold. The choice which EIDR was considering was NOT between using ISAN or using DOI: it was between using DOI or using a non-ISO identifier. ISAN had already been rejected by EIDR.

Many other (non-ISO) schemes exist which can be used to build persistent identifiers (e.g. URN; URI; ARK; PURL; XRI, etc.). EIDR has pointed out in its statement on “EIDR Interoperability with other standards and identifiers” (March 2011, available at http://eidr.org/new-members-info/) that other internal identifiers are also in use, and increasingly identifiers such as URIs are assigned by other parties. The DOI System mandates that other standard identifier schemes must be explicitly recognised and noted as part of metadata and or syntax, explicitly promotes the use of identifiers from other schemes, and has always encouraged recognition and use of other identifier schemes, as shown in our factsheets e.g. http://www.doi.org/factsheets/DOIidentifiers.htm

We have from the outset encouraged EIDR to use ISAN where assets are so identifiable, and to indicate when an asset is already assigned an ISAN. However this cannot be mandated, and ISAN-IA was the sole SC9 agency to reject any proposal to discuss an agreed syntax and/or metadata expression of its identifier within DOI. We are pleased to hear that this may no longer be the case, as this would enable any confusion in the marketplace to be resolved.

The DOI WG repeatedly, and with good reason, rejected the view during development of the standard that scope of DOI should be defined solely by the referent, and the corollary “swiss-cheese” view of scope of identifiers as “land grabs” for areas not already covered.
This view is entirely inappropriate in a world of digital convergence. A referent may have multiple identifiers, as is recognised in the DOI System. The DOI System uses both existing and new identifier strings and makes them actionable. This has been explained exhaustively as part of the standards process leading to the final approved standard.

**Process**

IDF strongly objects to the way this matter has been dealt with at the 2011 Sydney SC9 meeting.

N 607, containing the only notification IDF had received that this issue was to be discussed, was distributed on Tue 3 May 2011 at 17:04, less than 24 hours before the SC9 meeting (allowing for Sydney time difference); whereas N600, the report from IDF on ISO 26324 DOI, was distributed over three weeks earlier on 11 April and specifically noted that “EIDR has produced guidelines re interoperability with other identifier schemes (notably UPC, Ad-ID, ISRC, and ISAN”); this should have alerted readers that this issue had been considered. As the IDF was not represented in Sydney, on receipt of N607 IDF sent, within one hour, a short informational note by e-mail to the SC9 secretariat, which we assumed would have been noted at the meeting. It is not clear if it was, but the Resolution wording suggests not.

EIDR has informed IDF that discussions have been on-going for several months between EIDR and ISAN-IA, which gave ample opportunity for this issue to be raised and passed to IDF; failing that, ISAN-IA should as a courtesy at least have contacted IDF directly to request clarification and obtain its views. In the absence of a full response from IDF being available at the meeting, we question whether a formal resolution was the appropriate response; a more constructive way forward would be to have the Chair or Secretary raise the issue with IDF and report back.

In addition we understand that it was noted at the subsequent TC46 meeting that the resolution process was carried out in a less than satisfactory manner.

13 May 2011