

Annual Report of an ANSI/OEOSC TAG to ISO TC172 Subcommittee Covering the Year 2014

TAG Subcommittee Number and Name: ISO/TC 172/SC 9

WG1 - Terminology and Test Methods for Lasers
 WG2 - Interfaces and System Specifications for Lasers
 WG3 - Safety (Joint with JWG 10 of IEC TC 76 [IEC 60825 series])
 WG4 - Laser Systems for Medical Applications
 WG5 - Laser Systems for General Applications
 WG6 - Optical Components and their Test Methods
 WG7 - Electro-optical Systems Other than Lasers

TAG Subcommittee Leader: Thomas J. Lieb

ISO Meetings Held During 2014

Subcommittee meetings usually include break-out meetings of working groups and project groups. List the top-level meeting; do not list the break-out meetings.

Subcommittee, Working, or Project Group Meeting Name	Date(s)	Location
	No Meetings	

ISO Meetings Scheduled for 2015

Subcommittee meetings usually include break-out meetings of working groups and project groups. List the top-level meeting; do not list the break-out meetings.

Subcommittee, Working, or Project Group Meeting Name	Date(s)	Location
TC 172/SC 9	June	Berlin

Significant Accomplishments in 2014 ISO Subcommittee : SC 9

- 1) SC Chairman, Mr. Breck Hitz (USA) wrote a summary statement on the activities of SC in the fall of 2014 (see text below)

**Report of Subcommittee SC 9 *Electro-optical systems*
to the parent Technical Committee ISO/TC 172**
(presented to ISO/TC 172 meeting 2014-09-22)

Probably the most challenging – and interesting – project on the SC9 agenda is the characterization of ultrashort pulses. Ultrashort pulses – measured in picoseconds and femtoseconds (10⁻¹² to 10⁻¹⁵ s) are finding many applications not only in scientific research, but in material processing, metrology, and machining. Our challenge is finding the experts in this technology who are willing to make the commitment to developing standards, rather than developing the technology itself. In recent years, we have identified several individuals who are interested in crafting ISO standards, but they also remain active in developing the technology. Despite this hindrance, we feel that the standards we are creating will make a positive contribution to the evolution of this important field.

Two other developing technologies are on the SC9 agenda: holography, and ring-down technology. Holography involves the utilization of optical interference for numerous applications, including very precise dimensional measurements. Ring-down technology is a very accurate method of quantifying tiny losses in optical components and media. Both technologies are of intense interest to many individuals, but neither has the broad commercial importance of ultrashort pulses. Another issue is that both holography and ring-down technologies are being developed in the private sector, where many proprietary techniques are evolving. The people doing this work are hardly interested in sharing their techniques, much less subjecting them to standardization. Nonetheless,

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within these limitations, we are developing standards which, we are confident, will be useful as these technologies move forward.

In other areas, SC9 is moving to update existing standards, keeping pace with the rapid evolution of laser and electro-optics technology. We are working jointly with IEC SC47E to develop standards for diode lasers, are we are evaluating the possibility of coordinating with the European Leadership in Fiber Laser Technology project to develop standards for optical fibers used in lasers.

- 2)
- 3) Dr. Marla Dowell continues to serve as the project leader to revise ISO/DIS 13694 Optics and photonics – Lasers and laser-related equipment – Test methods for laser beam power [energy] density distribution according to the discussion during the meeting.
- 4) WG 3 (JWG 10 with IEC TC 76) has been revitalized and reorganized at the ISO/IEC level to improve circulation and voting problems from the past.
- 5) From the DIN Secretariat in Berlin, these are the significant progress highlights from the year
 - ISO/DIS 11145: DIS ballot closed, comments received were answered; FDIS manuscript sent to ISO CS; wait for FDIS ballot dates
 - ISO 11151-1: FDIS ballot closed, manuscript for standard sent to ISO CS; standard under publication
 - ISO 11151-2: FDIS ballot closed, manuscript for standard sent to ISO CS; standard under publication
 - ISO/CD 11553-1: CD ballot
 - ISO/CD 11553-2: CD ballot
 - ISO/DIS 11810: DIS ballot closed, comments are under review by PL and secretariat
 - ISO/FDIS 13142: DIS ballot closed, comments received were answered; FDIS manuscript sent to ISO CS; FDIS ballot 2015-02-10 till 2015-04-11
 - ISO/DIS 13694: DIS ballot closed, comments received were answered; FDIS manuscript sent to ISO CS; FDIS ballot 2015-04-09 till 2015-06-10
 - ISO/DIS 14880-1: CD ballot closed, comments received were answered; DIS manuscript sent to ISO CS; DIS ballot 2014-12-04 till 2015-05-05
 - ISO/FDIS 17901-1: DIS ballot closed, comments received were answered; FDIS manuscript sent to ISO CS; wait for FDIS ballot dates
 - ISO/FDIS 17901-2: DIS ballot closed, comments received were answered; FDIS manuscript sent to ISO CS; wait for FDIS ballot dates
 - ISO/NP 17935: no progress

Significant Problems Encountered in 2014

ISO Subcommittee

Changeovers in personnel at the DIN office have sometimes resulted in communication faults.

US TAG Subcommittee

We have continued to experience low voting response and limited participation in creating commentary on the proposed standards.

Projections for 20145

ISO Subcommittee

The Subcommittee remains challenged to engender participation

TAG Subcommittee

This challenge is especially true in the US, but it should be noted on the positive side, that continuing strong efforts from the office of the TAG Secretariat (NC) ANSI, especially in the person of Ms. M. Stolberg, have kept the US active and have helped keep at least a nominal organized presence in the activities of the SC 9. The new activity in the technology segment for ultrashort pulses, is engendering additional participation

Document Admin Summary

The following list demonstrates the administrative processing (voting & Commenting, etc.) for document through the US delegation (TAG), as maintained by the ANSI NC Secretariat office (M. Stolberg)

Document No.	ID	Ref.	Title/Date
N565	6827	sc9N565.pdf (117KB)	N565: Meeting announcement: Next meeting of ISO/TC 172/SC 9 and its working groups, June 17-19, 2015 (Berlin, Germany). (2014-12-23)
N564	6826	sc9N564.pdf (103KB)	N564: RESOLUTION 4/2014: Resolution taken by correspondence - Re-appointment Convenor WG 7. (2014-12-23)
N563	6825	sc9N563.pdf (104KB)	N563: RESOLUTION 3/2014: Resolution taken by correspondence - Re-appointment Convenor WG 6. (2014-12-23)
N562	6824	sc9N562.pdf	N562: RESOLUTION 2/2014: Resolution taken by correspondence - Re-appointment Convenor WG 4.

		(104KB)	(2014-12-23)
N561	6823	sc9N561.pdf (104KB)	N561: RESOLUTION 1/2014: Resolution taken by correspondence - Re-appointment Convenor WG 1. (2014-12-23)
No US expert comments received. N560 ISO comments template Email your comments to Michele Stolberg by 02/08/15; email: michele@optstd.org	6822	sc9N560.pdf (306KB)	N560: ISO CD 10110-17 as for vote in ISO/TC 172/SC 1: Optics and photonics — Preparation of drawings for optical elements and systems — Part 17: Laser irradiation damage threshold. (2014-12-22)
N555	6820	sc9N555.pdf (391KB)	N555: Draft FDIS 17901-2 with changes tracked, Optics and photonics -- Holography -- Part 2: Methods for measurement of hologram. (2014-12-23)
N554	6819	sc9N554.pdf (591KB)	N554: Collated comments on ISO/DIS 17901-2: Optics and photonics -- Holography -- Part 2: Methods for measurement of hologram. (2014-12-23)
N553	6818	sc9N553.pdf (127KB)	N553: REPORT OF VOTING ON ISO/DIS 17901-2: Optics and photonics -- Holography -- Part 2: Methods for measurement of hologram recording characteristics. (2014-12-23)
N552	6817	sc9N552.pdf (365KB)	N552: Draft FDIS 17901-1 with changes tracked, Optics and photonics -- Holography -- Part 1: Methods of measuring diffraction efficiency and associated optical characteristics of holograms. (2014-12-23)
N551	6816	sc9N551.pdf (333KB)	N551: Collated comments on ISO/DIS 17901-1: Optics and photonics -- Holography -- Part 1: Methods of measuring diffraction efficiency and associated optical characteristics of holograms. (2014-12-23)
N550	6815	sc9N550.pdf (125KB)	N550: REPORT OF VOTING ON ISO/DIS 17901-1: Optics and photonics -- Holography -- Part 1: Methods of measuring diffraction efficiency and associated optical characteristics of holograms. (2014-12-23)
N549	6814	sc9N549.pdf (321KB)	N549: Draft FDIS 13694 with changes tracked, Optics and optical instruments -- Lasers and laser-related equipment -- Test methods for laser beam power (energy) density distribution. (2014-12-23)
N548	6813	sc9N548.pdf	N548: Collated comments on ISO/DIS 13694 (Ed 2): Optics and optical instruments -- Lasers and laser-

		(304KB)	related equipment -- Test methods for laser beam power (energy) density distribution. (2014-12-23)
N547	6812	sc9N547.pdf (126KB)	N547: REPORT OF VOTING ON ISO/DIS 13694 (Ed 2): Optics and optical instruments -- Lasers and laser-related equipment -- Test methods for laser beam power (energy) density distribution. (2014-12-23)
N546	6811	sc9N546.pdf (329KB)	N546: Draft FDIS 11145 with changes tracked, Optics and photonics -- Lasers and laser-related equipment -- Vocabulary and symbols. (2014-12-23)
N545	6810	sc9N545.pdf (241KB)	N545: Collated comments on ISO/DIS 11145 (Ed 4): Optics and photonics -- Lasers and laser-related equipment -- Vocabulary and symbols. (2014-12-23)
N544	6809	sc9N544.pdf (126KB)	N544: REPORT OF VOTING ON ISO/DIS 11145 (Ed 4): Optics and photonics -- Lasers and laser-related equipment -- Vocabulary and symbols. (2014-12-23)
N543	6808	sc9N543.pdf (432KB)	N543: Draft FDIS 13142 with changes tracked, Electro-optical systems -- Cavity ring-down technique for high-reflectance measurement. (2014-12-23)
N542	6807	sc9N542.pdf (109KB)	N542: Collated comments on ISO/DIS 13142: Electro-optical systems -- Cavity ring-down technique for high-reflectance measurement. (2014-12-23)
N541	6806	sc9N541.pdf (125KB)	N541: REPORT OF VOTING ON ISO/DIS 13142: Electro-optical systems -- Cavity ring-down technique for high-reflectance measurement. (2014-12-23)
ISO/DIS 14880-1 ISO comments template Email your vote/comments to Michele Stolberg by 04/17/15; email: michele@optstd.org	6786	sc9ISODIS_14880_1.pdf (1.3MB)	ISO/DIS 14880-1: Optics and photonics — Microlens arrays — Part 1: Vocabulary. (2014-12-04)
Explanatory Report/Result of voting	6785	sc9ExplanatoryReportCD14880_1.pdf (210KB)	EXPLANATORY REPORT and Result of voting on ISO/CD 14880-1: Optics and photonics -- Microlens arrays -- Part 1: Vocabulary. (2014-12-09)
Systematic Review items, due March 2015 Email your file requests to Michele Stolberg, all ballots due by 03/01/15;	6774	sc9Mar2015SysReviewList.doc (42KB)	ISO Systematic Review - New Ballots – 2014-10-15. (2014-10-15)

email: michele@optstd.org			
<p>US vote: Abstain (no US expertise)</p> <p>ISO/FDIS 11151-1</p> <p>ISO comments template</p> <p>Email your vote/comments to Michele Stolberg by 01/10/15; email: michele@optstd.org</p>	6773	sc9ISO_FDIS11151_1.pdf (677KB)	ISO/FDIS 11151-1: Lasers and laser-related equipment — Standard optical components — Part 1: Components for the UV, visible and near-infrared spectral ranges. (2014-11-27)
Report of voting	6772	sc9ReportVotingDIS11151_1.pdf (247KB)	REPORT OF VOTING ON ISO/DIS 11151-1 (Ed 2): Lasers and laser-related equipment -- Standard optical components -- Part 1: Components for the UV, visible and near-infrared spectral ranges. (2014-12-01)
<p>US response: Agree</p> <p>US votes received: Marla Dowell-- agree Dave Johnson-- agree Tom Lieb-- agree</p> <p>N559</p> <p>Email your vote to Michele Stolberg by 12/11/14; email: michele@optstd.org</p>	6768	sc9N559.pdf (62KB)	N559: DRAFT RESOLUTION 4/2014: Resolution by correspondence - Re-appointment Convenor WG 7. (2014-11-30)
<p>US response: Agree</p> <p>US votes received: Marla Dowell-- agree Dave Johnson-- agree Tom Lieb-- agree</p> <p>N558</p> <p>Email your vote to Michele Stolberg by 12/11/14; email: michele@optstd.org</p>	6767	sc9N558.pdf (62KB)	N558: DRAFT RESOLUTION 3/2014: Resolution by correspondence - Re-appointment Convenor WG 6. (2014-11-30)
<p>US response: Agree</p> <p>US votes received: Marla Dowell-- agree Dave Johnson-- agree Tom Lieb-- agree</p> <p>N557</p> <p>Email your vote to Michele Stolberg by 12/11/14; email: michele@optstd.org</p>	6766	sc9N557.pdf (62KB)	N557: DRAFT RESOLUTION 2/2014: Resolution by correspondence - Re-appointment Convenor WG 4. (2014-11-30)
<p>US response: Agree</p> <p>US votes received: Marla Dowell-- agree</p>	6765	sc9N556.pdf (62KB)	N556: DRAFT RESOLUTION 1/2014: Resolution by correspondence - Re-appointment Convenor WG 1.

<p>Dave Johnson-- agree Tom Lieb-- agree</p> <p>N556</p> <p>Email your vote to Michele Stolberg by 12/11/14; email: michele@optstd.org</p>			(2014-11-30)
<p>US vote: Abstain (no US expertise)</p> <p>ISO/FDIS 11151-2</p> <p>ISO comments template</p> <p>Email your vote/comments to Michele Stolberg by 12/28/14; email: michele@optstd.org</p>	6754	<p>sc9ISO_FDIS_11151_2.pdf (472KB)</p>	<p>ISO/FDIS 11151-2: Lasers and laser-related equipment — Standard optical components — Part 2: Components for the infrared spectral range. (2014-11-20)</p>
<p>Report of voting</p>	6753	<p>sc9ReportVotingDIS11151_2.pdf (256KB)</p>	<p>REPORT OF VOTING ON ISO/DIS 11151-2 (Ed 2): Lasers and laser-related equipment -- Standard optical components -- Part 2: Components for the infrared spectral range. (2013-09-23)</p>
<p>N540</p>	6742	<p>sc9N540.pdf (186KB)</p>	<p>N540: Voting result: ISO/DIS 11810 (Ed 2): Lasers and laser-related equipment -- Test method and classification for the laser resistance of surgical drapes and/or patient protective covers -- Primary ignition, penetration, flame spread and secondary ignition. (2014-11-05)</p>
<p>N539</p>	6741	<p>sc9N539.pdf (432KB)</p>	<p>N539: RESULT OF VOTING ON NEW WORK ITEM PROPOSAL: Safety of machinery — Laser processing machines — Part 2: Safety requirements for hand-held laser processing devices. (2014-11-05)</p>
<p>N538</p>	6740	<p>sc9N538.pdf (424KB)</p>	<p>N538: RESULT OF VOTING ON NEW WORK ITEM PROPOSAL: Safety of machinery - Laser processing machines - Part 1: General safety requirements. (2014-11-05)</p>
<p>N537</p>	6739	<p>sc9N537.pdf (272KB)</p>	<p>N537: RESULT OF VOTING ON NEW WORK ITEM PROPOSAL: Lasers and laser-related equipment -- Test method for angle resolved scattering. (2014-11-05)</p>
<p>N536</p>	6665	<p>sc9N536.pdf (1.2MB)</p>	<p>N536: Revisions marked: ISO/DIS 14880-1: Optics and photonics — Microlens arrays — Part 1: Vocabulary. (2014-09-22)</p>
<p>N535</p>	6664	<p>sc9N535.pdf (203KB)</p>	<p>N535: Explanatory report and Result of voting on ISO/CD 14880-1.2: Optics and photonics -- Microlens arrays -- Part 1: Vocabulary. (2014-09-22)</p>

N534	6638	sc9N534.pdf (240KB)	N534: REPORT OF VOTING ON ISO/DIS 11151-2 (Ed 2): Lasers and laser-related equipment -- Standard optical components -- Part 2: Components for the infrared spectral range. (2014-09-04)
N533	6637	sc9N533.pdf (231KB)	N533: REPORT OF VOTING ON ISO/DIS 11151-1 (Ed 2): Lasers and laser-related equipment -- Standard optical components -- Part 1: Components for the UV, visible and near-infrared spectral ranges. (2014-09-04)
N532	6636	sc9N532.pdf (280KB)	N532: Result of voting on Revision of ISO 11553-2:2007: Safety of machinery -- Laser processing machines -- Part 2: Safety requirements for hand-held laser processing devices. (2014-09-04)
N531	6635	sc9N531.pdf (272KB)	N531: Result of voting on Revision of ISO 11553-1:2005: Safety of machinery -- Laser processing machines -- Part 1: General safety requirements. (2014-09-04)
N530	6634	sc9N530.pdf (174KB)	N530: Result of voting on ISO/DIS 13142: Electro-optical systems -- Cavity ring-down technique for high-reflectance measurement. (2014-09-04)
N529	6577	sc9N529.pdf (218KB)	N529: Result of voting and comments on ISO/DIS 13694 (Ed 2): Optics and optical instruments - - Lasers and laser-related equipment -- Test methods for laser beam power (energy) density distribution. (2014-07-16)
N528	6576	sc9N528.pdf (231KB)	N528: Result of voting and comments on ISO/DIS 11145 (Ed 4): Optics and photonics -- Lasers and laser-related equipment -- Vocabulary and symbols. (2014-07-16)
Proposed US NWIP ballot Novak ballot Palmarì ballot N527 NWIP ballot Email your ballot to Michele Stolberg by 07/13/14; email: michele@optstd.org	6490	sc9N527.pdf (499KB)	N527: NWIP: Lasers and laser-related equipment — Test method for angle resolved scattering. (2014-06-02)
US position: Agree, no comments US votes received: Erik Novak - Approve, no comments Tom Lieb - Approve, no comments	6481	sc9DIS13142.pdf (394KB)	ISO/DIS 13142: Electro-optical systems — Cavity ring-down technique for high-reflectance measurement. (2014-05-19)

ISO/DIS 13142 ISO comments template Email your vote/comments to Michele Stolberg by 07/29/14; email: michele@optstd.org			
Explanatory Report	6480	sc9CD13142ExplR eport.pdf (109KB)	Explanatory report and Result of voting, ISO/CD 13142.2 - 2nd CD vote. (2014-05-19)
US vote: Agree, no comments US votes received Novak: Abstain Lieb: Agree, no comments N526 ISO comments template Email your vote/comments to Michele Stolberg by 08/03/14; email: michele@optstd.org	6471	sc9N526.pdf (291KB)	N526: ISO/IEC CD 11553-2: Safety of machinery — Laser processing machines — Part 2: Safety requirements for hand-held laser processing devices. (2014-05-16)
US vote: Agree, no comments US votes received Novak: Abstain Lieb: Agree, no comments N525 ISO comments template Email your vote/comments to Michele Stolberg by 08/03/14; email: michele@optstd.org	6470	sc9N525.pdf (367KB)	N525: ISO/IEC CD 11553-1.2: Safety of machinery — Laser processing machines — Part 1: General safety requirements. (2014-05-16)
N524	6369	sc9N524.pdf (185KB)	N524: Result of voting ISO/DIS 17901-2: Optics and photonics -- Holography -- Part 2: Methods for measurement of hologram recording characteristics. (2014-05-15)
N523	6368	sc9N523.pdf (126KB)	N523: Result of voting ISO/DIS 17901-1: Optics and photonics -- Holography -- Part 1: Methods of measuring diffraction efficiency and associated optical characteristics of holograms. (2014-05-15)
US position: Agree, with comments Proposed US comments US votes received: Johnson: Agree, with comments (submitted) Dowell: Abstain Palmari: Abstain	6427	sc9DIS11810.pdf (737KB)	ISO/DIS 11810: Lasers and laser-related equipment — Test method and classification for the laser resistance of surgical drapes and/or patient protective covers — Primary ignition, penetration, flame spread and secondary ignition — (2014-04-17)

<p>ISO/DIS 11810</p> <p>ISO comments template</p> <p>Email your vote/comments to Michele Stolberg by 08/27/14; email: michele@optstd.org</p>			
<p>US position: Abstain (one US response received: Johnson, Abstain)</p> <p>ISO/DIS 17901-1</p> <p>ISO comments template</p> <p>Email your vote/comments to Michele Stolberg by 04/10/14; email: michele@optstd.org</p>	6376	sc9DIS17901_1.pdf (405KB)	ISO/DIS 17901-1: Optics and photonics — Holography — Part 1: Methods of measuring diffraction efficiency and associated optical characteristics of holograms (2014-01-30)
<p>N522</p>	6343	sc9N522.pdf (89KB)	N522: Report of voting on ISO/CD 14880-1.2: Optics and photonics -- Microlens arrays -- Part 1: Vocabulary. (2014-02-12)
<p>N521</p>	6342	sc9N521.pdf (107KB)	N521: Explanatory report and result of voting on ISO/CD 13142: Electro-optical systems -- Cavity ring-down technique for high-reflectance measurement. (2014-02-12)
<p>US position: Agree, with comments</p> <p>*REVISED* US comments</p> <p>Proposed US comments</p> <p>US responses received: Novak, Agree, no comments Nemes, Agree, with comments (proposed)</p> <p>ISO/DIS 11145</p> <p>ISO comments template</p> <p>Email your vote/comments to Michele Stolberg by 06/17/14; email: michele@optstd.org</p>	6341	sc9DIS11145.pdf (332KB)	ISO/DIS 11145: Optics and photonics — Lasers and laser-related equipment — Vocabulary and symbols (2014-02-06)
<p>US position: Agree, with comments</p> <p>*FINAL* US comments</p> <p>*REVISED* Proposed US comments</p> <p>Proposed US comments</p> <p>US responses received: Johnson, Abstain Nemes, Agree with comments (proposed)</p>	6331	sc9DIS13694.pdf (327KB)	ISO/DIS 13694: Optics and optical instruments — Lasers and laser-related equipment — Test methods for laser beam power (energy) density distribution (2014-01-30)

<p>ISO/DIS 13694</p> <p>ISO comments template</p> <p>Email your vote/comments to Michele Stolberg by 06/10/14; email: michele@optstd.org</p>			
<p>US position: Abstain (one US response received: Johnson, Abstain)</p> <p>ISO/DIS 17901-2</p> <p>ISO comments template</p> <p>Email your vote/comments to Michele Stolberg by 04/10/14; email: michele@optstd.org</p>	<p>6330</p>	<p>sc9DIS17901_2.pdf (480KB)</p>	<p>ISO/DIS 17901-2: Optics and photonics — Holography — Part 2: Methods for measurement of hologram recording characteristics (2014-01-30)</p>