



Issue 1, April 1999

# WorldSID Newsletter

A publication by Biokinetics on behalf of the ISO WorldSID Task Group

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## Dear Reader,

I'm very proud and pleased to present to you this first issue of the WorldSID Newsletter. Some of you may be quite familiar with WorldSID, but for others this newsletter includes new facts about the development of the new, worldwide harmonized, advanced technology side impact crash test dummy. You will undoubtedly agree with me that the uniqueness of this program and the potential impact this development may have on occupant protection in side impact and associated standards or regulations warrant reaching a large audience. This newsletter is one way of doing so, and in the future we expect to publish key results at renowned conferences. In addition, a website has been created to keep you informed on a day-to-day basis. We sincerely hope and expect that all these lines of communication will help the development of WorldSID.


Although the project was kicked-off in late 1998, we are only now producing the first issue of the newsletter. You may be asking, "Has nothing been done in the mean time?" On the contrary! As you will read, the WorldSID program is well under way. However, we wanted to get through the major part of preparing the actual design work before releasing the first newsletter. True, some important issues are not yet resolved, but we can definitely say that major progress has been made and we are on the verge of detailing the design requirements and selecting the design team.

We encourage you to pass this newsletter on to interested people in your and other organizations. Please help us to keep our mailing list current by providing us with your mailing and e-mail address, as well as any additions or changes you would like to see included. I wish you informative reading.

Marc Beusenberg  
WorldSID project manager  
On behalf of the ISO WorldSID Task Group

## Communication is Key - Note from the Editor

The WorldSID Task Group acknowledges the uniqueness of this project as well as the associated challenges and uncertainties. The group is facing these challenges and believes that good communication will be key to the success of WorldSID. We therefore encourage any suggestions you may have regarding improvement to the way in which we relay information to you.

In addition to the newsletter we have created a website that will provide you with information on WorldSID on a more daily basis. The symbol  designates that a particular document or additional information can be found on our website: [www.worldsid.org](http://www.worldsid.org). This website consists of two sections. Information to the general public. This section is freely accessible and can be recognized by the red buttons under the heading "News and Releases". Information shared between and restricted to the members of the WorldSID Task Group can be recognized by the blue buttons under the heading "Work Items". This section of the website can only be accessed with a user id and password that is provided to WorldSID Task Group members only. This section is password protected as it may contain information that is not yet approved by the Task Group. We trust that you will understand that this protection is necessary. We

realize that limited information is available on the "News and Releases" section but we promise to improve this soon.

Updated: April 26, 99

**WorldSID**  
The worldwide harmonized side impact crash test dummy.

Maintained by Biokinetics and Associates Ltd. & First Technology Safety Systems

**News & Releases**  
For general public interested in the latest about WorldSID

- Media
- Newsletters & Contacts
- ISO Task Group Releases
- Links
- Just Released **NEW**  
WorldSID - Design Request for Proposals

**Work Items**  
Research and work items for ISO Task Group members

- Meeting Notices
- Task Group Contacts
- Minutes and Documents
- Miscellaneous Items

Many documents on this site are in PDF format and require Adobe Acrobat Reader to view. To download a free copy click here.

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We realize that to make it happen industry initiative is not enough, government bodies at various levels must actively participate. Consumer representative organizations will also critically watch the development. Many more organizations are involved, not in the least crash test laboratories, and dummy and instrumentation manufacturers. The WorldSID Task Group will make every effort to inform all interested parties and invite them to participate.

## Global Harmonization of Side Impact

The WorldSID development covers one aspect of global harmonization of side impact occupant protection. Two other major aspects are currently being addressed by the International Harmonized Research Activities (IHRA).

Governmental bodies worldwide have joined efforts in the IHRA Biomechanics group to establish and review the biomechanical basis of side impact protection. The ISO WorldSID Task Group has made a specific point of coordinating and co-operating with IHRA Biomechanics. This co-operation will prove very valuable in enhancing the biofidelity and anthropometry design targets for WorldSID as well as the injury parameters that the dummy will assess.

The same government bodies have joined efforts in the IHRA Side Impact group to review current test protocols and procedures, injury and accident data in order to establish a worldwide-harmonized test procedure for side impact. It is clear that the work of this group will be of great importance for WorldSID as it defines loading conditions, sensitivity, durability, repeatability and reproducibility requirements. The ISO WorldSID Task Group has made it clear that the new dummy should be developed for this new test procedure.

## The Tri-Chair WorldSID Task Group

The ISO WorldSID Task Group is formed by representatives from three regional advisory groups: the Americas, Europe and Asia/Pacific. At every task group meeting, each region is represented by its chairperson, its secretary, four independent representatives and a maximum of one government representative from every country in that region. The representatives are selected at the regional level prior to every task group meeting.

To avoid conflicts of interest, members of the task group cannot represent dummy manufacturers or manufacturers of dummy instrumentation. It is the task of the WorldSID project manager to formally represent the WorldSID Design Team in the task group. Experts from the dummy manufacturing and the instrumentation manufacturing industries are invited to be advisers and their input is of great value to the group.

The ISO WorldSID Task Group is chaired by the regional chairpersons, depending on where the meeting is held. Please contact your local regional chairperson for details on your regional advisory group meetings.

## An Industry Initiative

For more than a decade, the automotive industry has been further improving side impact occupant protection of passenger vehicles using different side impact crash test dummies for different regions of the world. This situation has proven to be impractical, expensive and unnecessary as people around the world are essentially the same from a biomechanical perspective. Also, with today's globalization of industry and regulations, we see a tremendous increase in discussions on worldwide harmonization of side impact.

The International Organization for Standardization (ISO) has always been a focus point for the development of an internationally standardized set of performance specifications for anthropomorphic test devices or crash test dummies. I'm sure some of you hold strong memories of the lively discussions in ISO/TC22/SC12/WG5 on biofidelity specifications of side impact dummies.

In 1997, OSRP took the initiative and proposed the creation of a new task group, operating under auspices of ISO/TC22/SC12/WG5, that would focus on the specifications, design and hardware fabrication of a worldwide harmonized advanced side impact dummy: WorldSID. Support from ISO was formalized in Resolution 1 of the November 1997 meeting of WG5.

We are happy to say that WorldSID is now supported and sponsored by the automotive industry worldwide including: OSRP and AAM in North America, ACEA in Europe and JAMA in Japan.

Formal invitations have been sent to IHRA Biomechanics and IHRA Side Impact asking for representation of these groups at the WorldSID Task Group. Depending on the progress and discussions at the time, other organization may expect similar invitations in the future.

## WorldSID Development Program

The major objective of the WorldSID Development Program is to develop the new, worldwide acceptable, advanced technology, side impact anthropomorphic test device (crash dummy) "WorldSID" for assessment of injury risk to car occupants in lateral collisions.

The development of WorldSID can be divided into several phases. The table below includes a short description and major deliverables of these phases. The start of the total program is defined by the initiation of the ISO WorldSID Task Group (in 1997). The end of the total program is defined by a verified production version WorldSID, including all specifications for consideration of WorldSID-a in regulations worldwide.



Description	Major Deliverables
<b>I. Program Initiation</b>	
Initiate WorldSID development. Set up structure within ISO. Secure funds for Phase II. Assign project manager.	Start of dummy development and ISO WorldSID Task Group.
<b>II. WorldSID-a Development</b>	
Develop first (a) prototype with all specifications. To include evaluation of parts but not full biofidelity evaluation.	<ul style="list-style-type: none"> <li>- Full WorldSID-a assembly</li> <li>- Comprehensive product specifications</li> <li>- User Specifications</li> <li>- Simulation model databases (optional)</li> </ul>
<b>III. WorldSID-a Evaluations</b>	
Worldwide evaluations of the WorldSID-a. Thorough assessment of biofidelity, repeatability and reproducibility.	<ul style="list-style-type: none"> <li>- Worldwide evaluation data-base</li> <li>- Test data analyses</li> <li>- List of dummy improvements</li> </ul>
<b>IV. Production Version WorldSID Development</b>	
Incorporate improvements until production version WorldSID is achieved. Major design changes can still be incorporated.	Same as for WorldSID-a but upgraded to production version.
<b>V. WorldSID Verification and Release</b>	
Throughout the upgrading of WorldSID-a to the production version, several evaluations will take place until an acceptable design is achieved and injury assessment risk functions are established. In this stage only fine-tuning is expected.	<ul style="list-style-type: none"> <li>- World-wide evaluation data-base</li> <li>- Publications and release</li> <li>- Regulation-ready specs</li> </ul>

Phase I is completed (with the exception of all funding commitments) and the beginning of Phase II was marked by the assignment of Biokinetics and Associates Ltd. as project manager in December 1998.

A program of this size, uniqueness and potential impact cannot be completed overnight. The WorldSID Task Group expects that the total development will take several years to complete with a target for completion in the 2005-2007 period.

## WorldSID-a Update

Since the start of the WorldSID-a Development (phase II), a number of things have happened. Technical details will be left for future newsletter releases, but below are some highlights of the past four months.

- Each region listed the advantages and disadvantages of existing side impact dummies. This resulted in a set of direction for the WorldSID-a design. Biomechanical data had already been carefully studied by ISO/TC22/SC12/WG5 and this group's reference report TR9790 was taken as a biomechanical basis for the biofidelity of the dummy. A "design baseline" which outlines the design and response specifications of the WorldSID-a  was established. The Task Group anticipates further update of these specifications to continue until June 1999, before the actual design and build starts.
- Commitment has been obtained from the SID-2000 project, a European Commission co-sponsored project. Relevant tasks of this project have now been aligned with the WorldSID-a .
- Dummy and instrumentation manufacturers were invited to submit proposals for design concepts for the WorldSID-a. The request for proposals was published in January 1999 and responses were due on February 25, 1999  . Multiple concepts were proposed for almost all parts of the dummy. This provided the Task Group with sufficient food for thought.
- At the May 8-10 1999 meeting of the ISO WorldSID Task Group in Ottawa, Canada, a pre-selection of concepts was made but the selection of concepts for some parts of the dummy was postponed with the intention of requesting further details. This has delayed the announcement of the composition of the WorldSID Design Team.
- Current issues include obtaining commitment at various levels. Funding of the WorldSID-a development is one of these issues. This situation, should be resolved in the next few months.

Originally the time frame for WorldSID-a was set at January 2000, so that the first assembly would be ready and the specifications released by March 2000. This ambitious time frame was set independent of other worldwide harmonization efforts, and has been revisited. The Task Group expects that an additional 6 months will be required to allow for proper coordination with other harmonization activities in side impact occupant protection worldwide.

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