

## IRUG Status, Changes and Code Usage

Gary Smith and Beth Jaggar

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*As IRUG and RELAP5-3D improve, membership continues to grow and changes are occurring.*

### 1. GROWTH

IRUG membership has grown continuously since 2010 when there were 31 members. So far in 2014, there are 80 members, but new members are added monthly.

Many factors have contributed to the growth. Universities are responding to industry need for a new generation of nuclear engineers as baby boomers retire and must be replaced. The nuclear renaissance has created heightened interest and opportunities for research and development at universities and nuclear power companies. Most of the Small Modular Reactor (SMR) companies are using RELAP5-3D for their analyses. In fact, several SMR companies have contracted with INL to modify RELAP5-3D to suite particular needs.

A new initiative to expand IRUG membership is focused on advertising. Ads have initially been placed in ANS publications. New ads will be placed in technical journals such as ASME because RELAP5-3D is being used for modeling many things besides nuclear plants, such as jet engines, steam supply systems, and Arizona Public Services is using it to model gas- and coal-fired plants.

Attendance at the annual RELAP5 International Users Group Meeting has grown every year, reaching an all-time high of 54 this year. The two-day IRUG seminar was preceded by a three-day advanced RELAP5-3D training class which served as follow-on to last year's IRUG basic training course on RELAP5-3D. The training was attended by more than 30 people. A second basic training course is being considered for the 2015 annual IRUG meeting. If there is enough interest, additional classes may be scheduled based upon membership needs.

### 2. Membership Duration and Fees

As in the past, 93% of all membership fees are reinvested directly into code maintenance and improvements such as the releases of Versions 4.1.3 and 4.2.1 in the past year. This continued reinvestment in RELAP5-3D to keep the code updated and applicable to the needs of its members makes membership in IRUG a great value.

Five-year licenses are granted to universities for educational use. This longer license cuts down paperwork for both parties. As a result of this success, IRUG will make 5-year licenses available to all members. Under the terms of the 5-year license, licensees may pay yearly and may opt to terminate early with no obligation to make further payments for subsequent years.

License fees have remained the same for several years. To keep up with inflation and allow the IRUG to continue providing the same level of service, a 5% rise will likely go into effect on June 1, 2015.

Licensees are encouraged to renew their memberships before the rate hike. Modifications can be made at any time prior to termination of the original agreement.

### **3. Usage**

US Federal regulation 10 CFR 810 prevents the export of RELAP5-3D to sensitive countries. All licensees must fill out the standardized Program Participation form that Beth Jaggard sends to licensees to list their foreign nationals that will use RELAP5-3D before they have permission to use it.

A presentation on export compliance is available on the RELAP5-3D web site under the 2014 IRUG meeting. It explains that if you have any foreign national who may use the code, that person's name should be included on the Program Participation form, prior to using the code, so that the person can be properly investigated. If the person is from a sensitive country, an NA-242 review may be necessary before the person may have access to RELAP5-3D.