Policy for an IRIS Rapid Array Mobilization Program (RAMP)

Introduction: What is RAMP?

RAMP is a component of the IRIS response to unanticipated seismic events such as earthquakes or volcanic eruptions. It permits deployment of instruments in the field on a time-table that is not possible within the conventional PASSCAL structure. It is justified on the basis of the potential scientific return from studies of aftershocks of a significant earthquake or of other seismic sources, and represents a natural and responsible effort by the seismological community to address a societal need.

IRIS policy and resources:

The initiative for a RAMP must come from the scientific community. The decision on whether IRIS will support a RAMP is ultimately the decision of the IRIS president and will generally be made within 24 hours of a request for RAMP instruments. The decision will be based on the guidelines outlined in Appendix A. IRIS will provide the following services to scientists undertaking a RAMP.

A. IRIS has dedicated 10 6-component REFTEKs to this program at the present. RAMP instruments are expected to be at the instrument center when not in the field for a RAMP deployment, and are not considered as part of the general PASSCAL instrument pool during the normal PASSCAL scheduling process.

B. The level of IRIS support for a RAMP response will fall within one of three possible categories, depending on the significance of the event and the scientific potential of the opportunity.

- Large scale effort (>100K) for an exceptional event such as Loma Prieta.
- Modest support ($10-30K) to support small arrays deployed for relatively short times.
- Loan of instruments only.

These levels of support include, at most, funds for data acquisition and processing to generate a data base suitable for submission to the DMC in a timely manner. Funds for scientific analysis of the data or for instrument loan on a long-term basis must be arranged separately. Given expected rates of seismicity and funding limitations, level 2 efforts might be supported 2-4 times/year, whereas level 1 efforts might be supported once every 2-5 years. Of course, there may be exceptions to these estimates, given the unpredictability of Mother Nature.

C. IRIS will be responsible for coordinating RAMP activities with other agencies such as NSF, USGS, NCEER, EERI, UNAVCO, SCEC, FEMA, CDMG. Policies pertaining to detailed coordination will be developed in conjunction with these agencies.

D. IRIS maintains the right to recall instruments lent either through RAMP or through the normal PASSCAL program in the case of an instrument shortage due to an important event occurring on the heels of another. IRIS hopes that the instrument pool will be large enough for this to rarely be necessary.
Additional resources provided by IRIS:

1. Training interested scientists on use of instrumentation. IRIS expects that PI's proposing a RAMP will have already undergone training and does not intend to routinely provide technical field support for RAMPS activities.

2. Maintaining current lists of trained instrument users and compatible instrumentation that might be available within the IRIS community.

3. Facilitating organization of regional planning groups (see III.A.).

4. Acting as an scientific information center during a RAMP response.

5. Developing and distributing software at the DMC for rapid processing of data from a RAMP.

Obligations of RAMP participants:

A. Initiation of a RAMP will generally be in response to a request from the scientific community. IRIS expects that individual groups interested in conducting a RAMP for a given event will communicate among themselves and develop a deployment plan before contacting IRIS. To facilitate this process IRIS will conduct workshops to organize regional interest groups and plan responses.

B. Participants are responsible for obtaining training on PASSCAL instruments prior to deployment.

C. Participants are responsible for obtaining necessary permission and/or official permits for deploying instruments.

D. Data collected during a RAMP must be submitted to the DMC within 6 months of the deployment. This deadline is shorter than that for a normal PASSCAL program (ie. 1 year) because of the timely nature of the data collected.
Appendix A: Guidelines and Procedures

Criteria for supporting a RAMP:

Level 1: A very important event because of magnitude, location, and/or social impact. (examples: Loma Prieta, New Madrid [1811])

Level 2: An important event with broad-based scientific interest (examples: Joshua Tree, Mendocino Triple Junction, Borah Peak)

Level 3: Events of significant scientific interest when other instruments are not available (examples: large man-made shots of opportunity, moderate-size regional earthquakes of significant scientific interest)

(note: Requests for instruments to support RAMPs outside of the US must also demonstrate advance preparation to assure customs clearance for the equipment and adequate access to deployment sites.)

How to activate a RAMP:

Call or send email to:

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jim@iris.edu

or

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