

Don D. Reeder
Spokesman --USCMS
Chair -- USCMS Collaboration Board



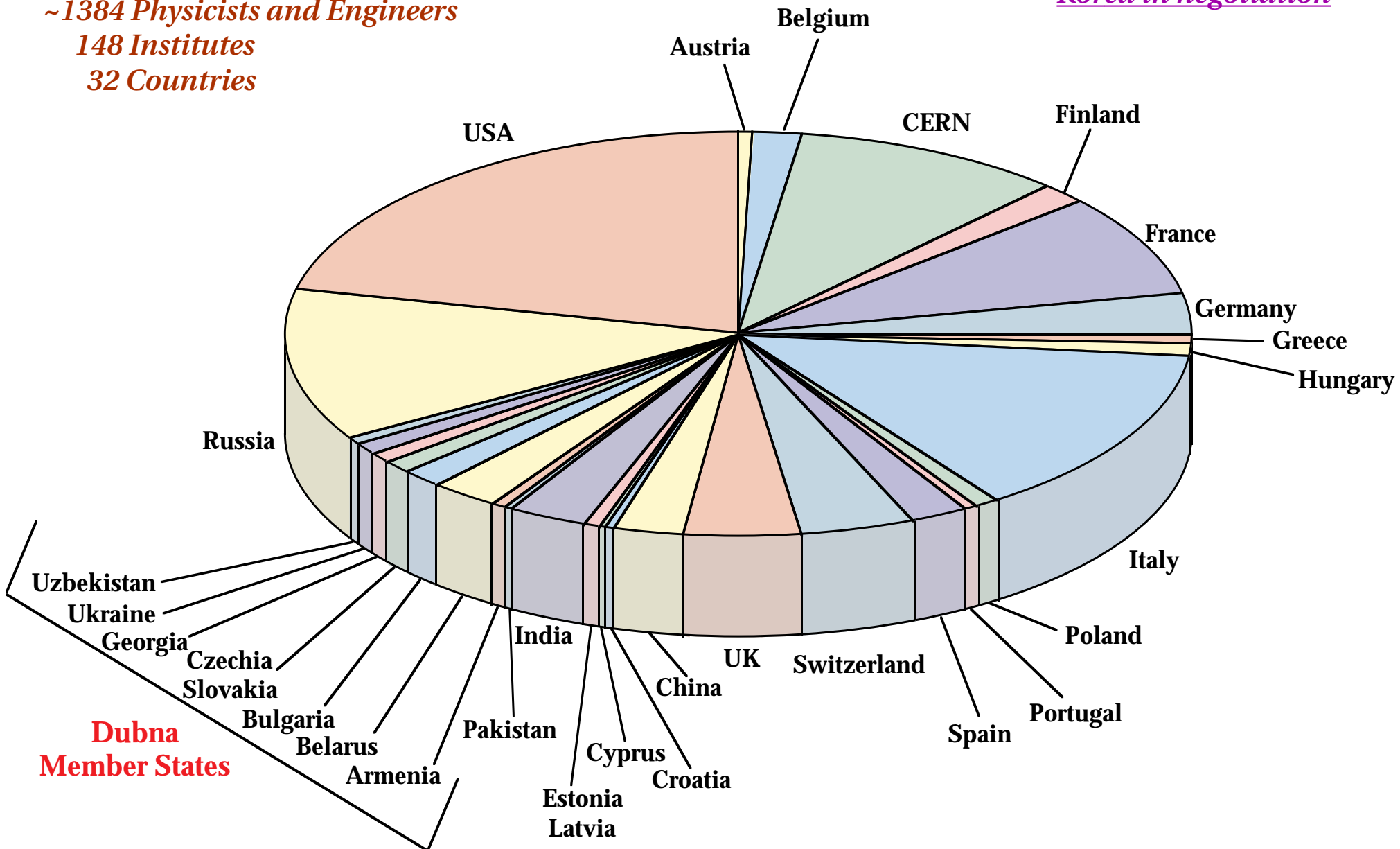
DOE/NSF Project Review
May, 1998



CMS Collaboration

*~1384 Physicists and Engineers
148 Institutes
32 Countries*

Korea in negotiation





US CMS Collaboration

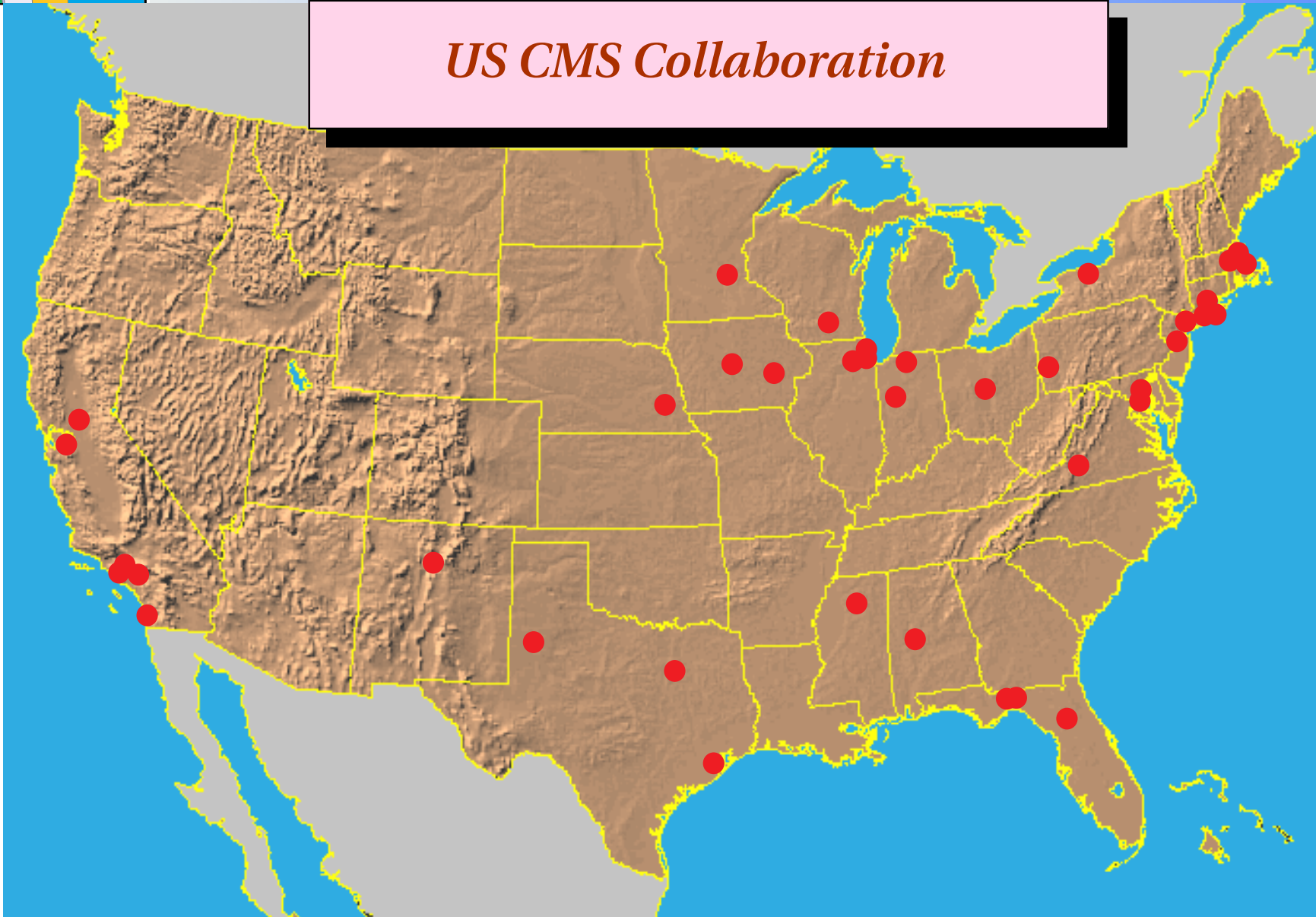
(312 Members from 36 Institutions)

University of Alabama
Boston University
Brookhaven National Laboratory
University of California, Davis
University of California, Los Angeles
University of California, Riverside
University of California, San Diego
California Institute of Technology
Carnegie-Mellon University
Fairfield University
Fermi National Accelerator Laboratory
University of Florida
Florida State University
Florida State University (SCRI)
University of Illinois at Chicago
University of Iowa
Iowa State University
Johns Hopkins University
Los Alamos National Laboratory
University of Maryland
Massachusetts Institute of Technology
University of Minnesota
University of Mississippi
University of Nebraska
Northeastern University
Northwestern University
University of Notre Dame
Ohio State University
Princeton University
Purdue University
Rice University
University of Rochester
Rutgers University
University of Texas at Dallas
Texas Tech University
University of Wisconsin



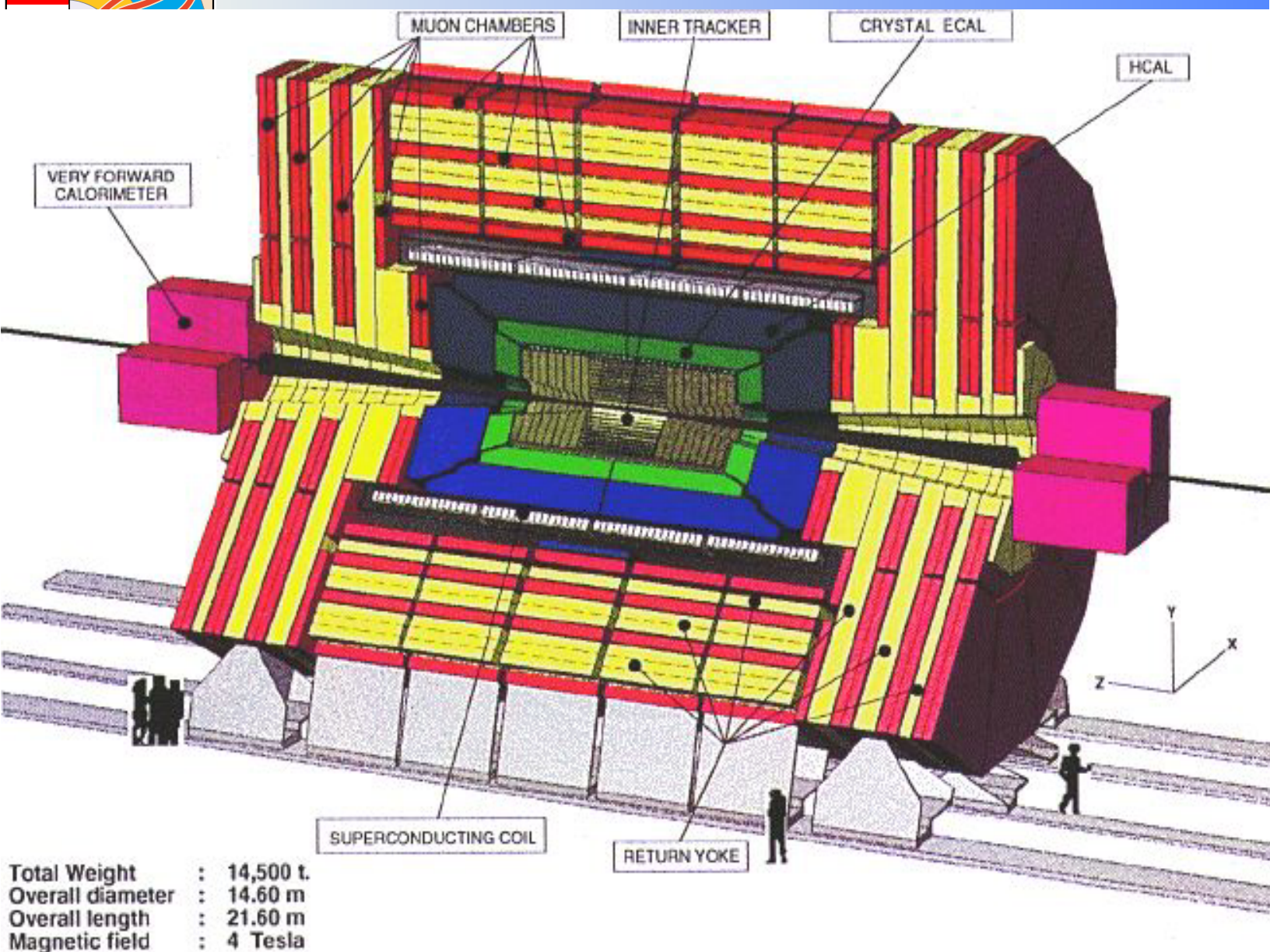
Demography

US CMS Collaboration



April 11, 1996

312 of ~2000 US Experimental Physicists



PHYSICS GOAL -detect new particles and interactions.
 (Higgs, SUSY, ???? signals: leptons, jets, missing energy)

- **4T Solenoidal Field**
- **Iron flux return to remeasure muons (Common)**
- **Good Tracking (E-pixels)**
- **Good e/γ identification and measurement (ECAL)**
- **Good muon identification and coverage (EMU)**
- **Good missing ET measurement (HCAL)**



Component Institutions

Endcap Muon	HCAL	Trigger/DAQ
Alabama	Boston	UC Davis
UC Davis	UCLA	UCLA
UCLA	Fairfield	UC San Diego
UC Riverside	Fermilab	Fermilab
Carnegie Mellon	Florida State	Iowa
Fermilab	Illinois Chicago	Iowa State
Florida	Iowa	MIT
Northeastern	Iowa State	Mississippi
Ohio State	Maryland	Nebraska
Purdue	Minnesota	Northeastern
Rice	Mississippi	Ohio State
UT Dallas	Notre Dame	Wisconsin
Wisconsin	Purdue	
	Rochester	
	Texas Tech	

ECAL	Tracking	Software
Brookhaven	UC Davis	UC Davis
Caltech	Fermilab	UCLA
Fermilab	Florida State (SCRI)	UC Riverside
Livermore	Johns Hopkins	UC San Diego
Minnesota	Los Alamos	Caltech
Northeastern	Mississippi	Carnegie Mellon
Princeton	Northwestern	Fermilab
	Purdue	Florida
	Rice	Florida State (SCRI)
	Texas Tech	Johns Hopkins
		Maryland
		Northeastern
		Rice
		Wisconsin



Organizational Principles

Scope:

- The CMS detector, with a CERN budget of ~400 MCHF, is a large project ---perhaps ~800M\$ by our accounting.
- Responsibility rests with the CMS Spokesman, assisted by his Deputy and several staff members; Technical Coordinator, Resource coordinator, Project Office etc.
- Still too unwieldy, so authority delegated to the individual components subject to coordination and review at the higher levels.

US Perspective

- to participate in frontier physics and be good stewards of the funds entrusted us, while at the same time accomodating to the overall imperatives of the larger collaboration.
- Accept responsibility in entirety for some components. Permits a semi-autonomous operation subject to US accounting and management practices and still be imbedded in the overall collaboration.



US CMS Project

Project:

- The project organization embodies line responsibility and authority and the duties and procedures are detailed in the Project Management Plan.
- All individuals serving in management positions are appointed and serve at the pleasure of the appointing authority.

What's missing?

- i) An independent structure or forum for discussion of issues and concerns of the US participants regarding the Project
- ii) A means of addressing matters outside the Project scope.
- iii) A mechanism for effectively interfacing to the larger collaboration
- iv) provide information concerning the excitement and hard results of elementary particle experimentation to students and the larger community



US CMS Constitution

Membership:

- all members of the CMS collaboration from the US are members of US CMS.

Collaboration Board:

- is the primary body, composed of one representative from each US institution in CMS.

1 Institution = 1 vote; preferably by consensus, otherwise majority

- elects a Spokesperson, who also as the Chair of the CB for a 2 year term - renewable.
- acts to amend and to ratify by majority vote modifications to the Constitution.

Additional members are welcome!

(No adjustment of Project funding)



Constitution II

Component Institutional Boards

- composed of the CB representatives of each institution participating in a particular component or activity.
- A coordinator is elected for each activity to input and act for the collaboration on matters concerning their activity.(2-year term)

Executive Board

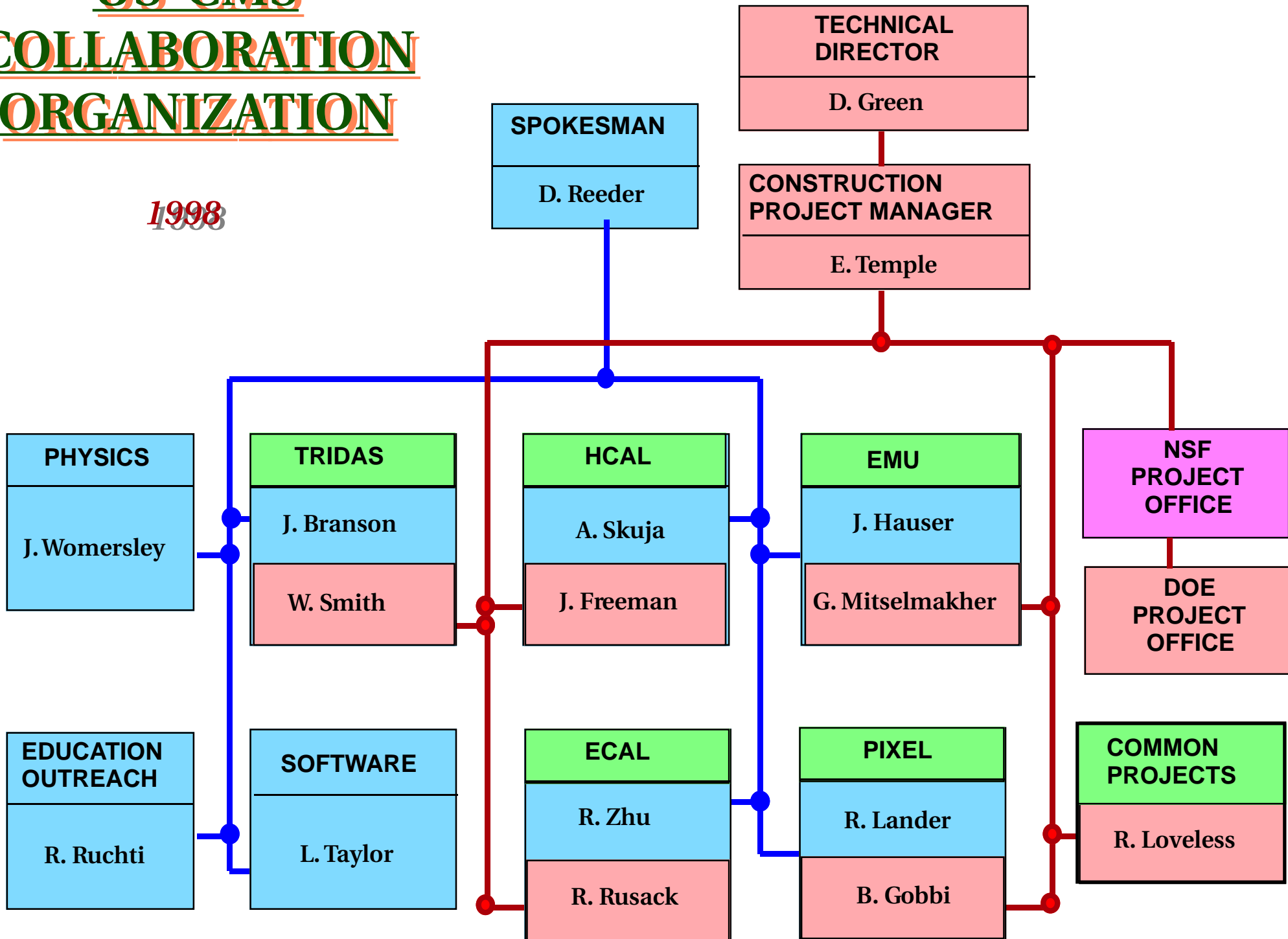
- composed of the component or activity coordinators, *ex officio* the TD and the CPM and is chaired by the Spokesperson.
- together with the Spokesperson, the EB is responsible for the those issues beyond the scope of the Project.

Duties of the Spokesperson

- Represent the interests of the US members within CMS
- Organize and chair meetings of the CB and EB.
- Conduct elections of the Coordinators.

US CMS COLLABORATION ORGANIZATION

1998





Beyond the Project

- *Need to segue seamlessly from Project to Experiment*

Among the requirements are:

- large volume, rapid and secure communication and data transfer.
- ability to participate in the analysis in an active and timely fashion
- meet our responsibility for operation and maintenance of our components.
- to communicate the progress and results both within the HEP community and to the larger lay community.

How?

- state-of-the-art networking facility (ESNET progeny?)
- timely acquisition of computing, data storage and software
- ramp up the pre-op activities as the project winds down (a rough estimate of the costs for this is ~ 9M\$ annually at completion of the ramp-up.)
- education and outreach activity with sufficient resources. (people + \$)