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Editors

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Welcome and Introduction

**Tony Hey, Director of the UK e-Science Core Programme & Corporate Vice
President of Technical Computing Microsoft®**

Dear Colleagues

This is only the fourth e-Science All Hands Meeting but already this seems like an established tradition. The e-Science Programme was begun at the initiative of Sir John Taylor, then Director General of the Research Councils with funding from the Government's Spending Review in 2000. Further funding was allocated to e-Science in the review of 2002 making a total investment of some £200M over the five-year period from 2001 to 2006. Many of the e-Science projects funded under the initial tranche of funding have now ended and we are now beginning to see the beginnings of real scientific benefits. Some examples are given below - but at this meeting I am sure you will see other examples where e-Science technology is poised to deliver significant benefits to the research community.

The particle physicists are now well on their way to constructing a genuinely global particle physics Grid to enable them to exploit the massive data streams expected from the Large Hadron Collider in CERN that will turn on in 2007. Astronomers are now offering several scientific services from their distributed, multi-wavelength 'virtual observatory' and have established the International Virtual Observatory Alliance as a forum for developing common standards. In addition, some exciting new scientific results on 'temporal explorations' of astronomical events have been achieved using Grid-enabled robotic telescopes. Using a 'SETI@Home style' of Grid computing, the ClimatePrediction.Net project have made headlines with their results on global warming predictions. The GODIVA project has delivered a Web Services based system that will allow real-time weather-forecast data to be incorporated into the British Maritime Technology's SARIS Search and Rescue Information System. The RealityGrid project used both the National Grid Service and the US TeraGrid at last year's AHM to perform some significant physics simulations. The DiscoveryNet project has led to some exciting commercial spin-off activities with their InforSense workflow and information mining and DeltaDot sensor companies. The DAME and eDiaMoND projects have also been successful in gaining follow-on funding from the DTI Technology Fund. Altogether 10 e-Science Centres were successful in the Inter-Enterprise Computing strand of the second call to this fund.

In 2002, the JISC established its Committee for Support of Research and although the JISC's remit is for IT support for the entire university research community rather than just science and engineering, development of the tools and technologies for e-Science are clearly an important subset of its 'e-Research' activities. Funding from the Research Councils for R&D projects is properly focussed on the 'R' for research: JISC R&D projects emphasize the 'D' for development and are looking to establish best practice and to develop prototype research services and tools for the research community. The two funding streams are therefore complementary and the university research community needs to make use of both funding streams to achieve its research

