

## PRESS RELEASE

### FOR IMMEDIATE RELEASE

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#### **SHIM6 TECHNIQUE FOR FUTURE-PROOF HIGH-AVAILABILITY INTERNET ACCESS PUBLISHED**

As the Internet more and more becomes a business critical resource, it is expected that increasing numbers of Internet users will require two or more independent connections to the Internet, a practice called "multihoming". Multihomed Internet users can continue to operate when one of their connections to the Internet fails, or even when their entire Internet service provider (ISP) becomes disconnected from the network. Traditional multihoming techniques require extra work from the large routers in the core of the Internet, and can only be used by a limited number of organizations. This technical handicap limits business expansion via the Internet as well as offering insufficient guarantees for its reliability. The need to create ever-powerful routers also involves a large degree of extra cost for the vendors and service providers.

With IPv6, the new generation of the Internet Protocol, the Internet can continue to grow unchecked for decades to come. In order to allow for wide-scale multihoming with IPv6, the Internet Engineering Task Force ([IETF](#) – the main international Internet standards technical body) started the "Shim6" effort (Site Multihoming by IPv6 Intermediation) in 2005. After four years, three documents have been published that together make up the Shim6 solution. Iljitsch van Beijnum, from [IMDEA Networks](#) and Jari Arkko from [Ericsson](#) are responsible for [RFC 5534](#), one of these documents. The other two were written by Marcelo Bagnulo from [UC3M](#) ([RFC 5533](#) and [RFC 5535](#)), the former in collaboration with Erik Nordmark of [Sun Microsystems](#). Shim6 has the end-user work stations and servers manage their own multihoming through the use of multiple IPv6 addresses. This way, Shim6 reduces the workload on the Internet's core routers, making it possible for all Internet users to multihome, even those who don't have access to the infrastructure required for traditional multihoming.

Due to the growing need for increased IP address space and as the date of its utter exhaustion looms closer – experts speak of 2010-2011 – the urge to develop solutions that allow Internetworking to continue being operative without major disruptions becomes paramount to networking researchers. IMDEA Networks is, together with University Carlos III of Madrid, one of a select few Spanish organizations that counts amongst its members authors of IETF RFCs. The brightest example is the already mentioned Dr. Marcelo Bagnulo, Associate Professor at UC3M, member of NETCOM

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Research Group and close collaborator with IMDEA Networks, who has authored several RFCs as well as being a member of the Internet Architecture Board ([IAB](#)), a branch of the IETF, which orchestrates the re-definition of the future Internet's architecture. RFCs are approved only after a thorough international reviewing process and are key stepping stones to the development of the Future Wireless Internet, IMDEA Networks' research driving force.

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## ABOUT IMDEA NETWORKS

IMDEA Networks is an international research institute supported by the Regional Government of Madrid and the European Union. The Institute brings together distinguished and young scientific researchers to develop cutting-edge science and technology in the field of networking. In order to ensure a truly international perspective, the Institute's working language is English. Promoting interdisciplinary collaboration, the Madrid-based Institute works in partnership with leading businesses and scientists from around the globe. By generating new knowledge and understanding through its activities, the Institute supports the continued development of Madrid and Spain as a centre for international scientific and technological research.

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