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**Recommendations for a Strategic Plan in
the Development and Implementation of
IPv6
Technologies in France**

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Recommendations issued by the IPv6 Task Force France

The Explosive Use of the Internet

Internet technologies will increasingly become a part of everyday life for all in the years to come. With the generalisation of high-speed wired (DSL, cable) and wireless (WiFi, GPRS, UMTS) connections, new generations of products and applications, designed to operate on IP networks, are coming on stream.

The significant increase of Internet use in France and around the world requires the implementation of a new version of the Internet protocol, identified by the acronym IPv6 (Internet Protocol version 6). Public sector laboratories and the French industry have largely contributed to its definition, development and validation of what is now called the New Generation Internet.

Convinced of the importance of IPv6-based technologies in satisfying the expected growth of Internet networks on a worldwide level and aware of the resulting economic impacts for various industrial sectors, certain countries (such as Japan, Korea and the USA) have already adopted well-defined strategies to foster and accompany the development of these technologies at different levels and within relatively short time-frames. It has now become indispensable for France to define and implement a proactive strategy for IPv6 network transition and use. **The IPv6 Task Force France, therefore, recommends explicit actions within a strategic plan defined for the development and use of IPv6 technologies in France.**

A vector for growth in France

This strategic plan should be supported and driven by the Government with the backing of Local Governments and large enterprises concerned either with industrial development outcomes or with internal technological mutations. The New Generation Internet should represent a major vector of growth for the French economy, and this offers opportunities which should be seized today.

The Task Force's recommendations fall into three categories: the first targets public authorities and services agencies, the second, the private sector, while the third focuses on the organisational and monitoring requirements for the strategic implementation of IPv6.

Role of Public Authorities and Agencies

Recommendations addressed at Public Sector Authorities and Agencies:

- Given the stakes involved in terms of competitiveness and economic growth, public sector authorities should proactively provide impetus and support for IPv6 deployment within national infrastructures, regional infrastructures and the infrastructures of public entities and public sites/campuses. More specifically, they should insist on:
 - ▶ The consideration of IPv6 in all decisions taken to connect to the Internet by all public entities and, on a priority basis, schools and universities.
 - ▶ The transition of all government Web servers (.gouv.fr) to dual IPv4 and IPv6 access.
- Public authorities and public service agencies, assisted by coordination bodies such as ADAE, , should define and announce their strategies, methodology and timeframes for the transition to IPv6 of all of their proprietary or shared communication infrastructures, specifically those connected to the Internet. Within their respective fields of competence, they should migrate existing applications and promote the development of innovative applications relying on IPv6 functions.
- Public procurement contracts must be organized in such ways that any new equipment intended to be linked to an open communication infrastructure can use the IPv6 protocol and benefit in this respect, from a standard after-sales support services from the supplier. When IPv6-readiness is not immediately available in a product, the supplier should be required to commit to an availability timeframe and to the appropriate terms of distribution and of necessary support services.
- Public Sector authorities should urge economic actors, acting alone or as a group (regions, trade federations, research laboratories, universities, schools, and major corporations) to strongly promote the implementation of IPv6 Internet technologies and to organize, to this end, test and demonstration areas, for the benefit of small and medium businesses, micro-businesses, individuals and citizens.
- Those leading regional high-speed networks connected to the RENATER network should promote the transition to IPv6 by:
 - ▶ Offering subscribers of regional networks dual IPv4 and IPv6 access.
 - ▶ Strongly involving universities and all higher educational institutions, so as to train staff and all future graduates in the use of these new technologies and to encourage the migration to IPv6 of all internal networks in such institutions.
 - ▶ Introducing a policy encouraging experimentation with new IPv6 services and the creation of new applications.
- Following in the example of the USA, i.e. initiate inter-ministerial reflection on the security strategy of the New Generation IP networks. In this respect, the French Defence Ministry, like the DoD, could assume a leading role in validating the procedures and technologies that need to be implemented.

- Having concerned ministries support international IPv6-related collaboration, and create cooperation programs with less industrialized countries where IPv6 represents the only technology possible for any future widespread access to the Internet.

Role of the Private Sector

Recommendations addressed at the Private Sector:

- Major corporations should immediately begin planning the upgrading of computer resources and networks, which will progressively and inevitably integrate IPv6. All new investments should take IPv6 integration into account. Measures should be taken to promote the porting of existing applications and the development of innovative IPv6-empowered functions.
- Telecom firms and manufacturers of professional and mass consumer electronic products, as well as application developers and software publishers should integrate IPv6 in their developments and publish the availability timeframe for these products.
- Operators should commit to a timeframe for the deployment of IPv6 commercial services on high-speed wired (DSL, Ethernet, cable) and wireless networks (WiFi, GPRS), so as to:
 - ▶ Progressively train the technical teams and build migration plans for existing networks.
 - ▶ Validate, with a significant number of clients, the technical/economic models that could be selected for commercial exploitation.
 - ▶ Promote experimentation with the new services on these networks.
 - ▶ Create test and demonstration areas allowing business users as well as consumers to validate the new products and services.

Recommendations focusing on organization and monitoring of the strategic plan:

- The IPv6 Task Force France recommends establishing a strategic IPv6 implementation plan, lead by the Ministry of Research and New Technologies.
- An organism should be empowered to ensure its implementation and monitoring. It should be allocated an operating budget and should be able to leverage the involvement of economic actors. In particular, its role should be to:
 - ▶ Drive and coordinate actions.
 - ▶ Provide information on trial and operational deployments and studies that are underway in France, Europe and around the world.
 - ▶ Encourage the dissemination and exploitation of results and best practices.

A strategic national plan integrating European dynamics

- ▶ Create an inventory of methods, achievements and problems, carry out both economic and transversal studies, and introduce benchmarks.
- ▶ Ensure coordination on a European level.

By formulating these recommendations, the members of the Task Force seek to raise awareness of both the public and private sectors of the stakes involved in the development of the Internet with IPv6.

The Task Force aspires to drive these national efforts and contribute towards the dynamics of European progress.

We would like to invite all persons wishing to contribute to the development of this **strategic** plan for IPv6 implementation to join the IPv6 Task Force France (www.fr.ipv6tf.org).

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