Analisa implikasi implementasi fixed mobile convergence terhadap regulasi telekomunikasi nasional

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Abstrak

Fixed-Mobile Convergence (FMC) merupakan tren pengembangan jaringan ke depan dengan akses layanan tanpa batas (seamless mobility) untuk pengguna jaringan tetap (fixed network) (PSTN, ISDN, FWA, WAN/LAN, WiFi dan Bluetooth) dan pengguna jaringan bergerak (mobile network) (GSM, CDMA dan PCS), dengan adanya konvergensi ini diharapkan layanan multimedia yaitu voice, data dan mobility dapat berjalan pada perangkat (terminal), tanpa melihat mode akses dan arsitektur jaringannya masing-masing. FMC ini di masa depan diharapkan dapat memenuhi kebutuhan pengguna akan layanan multimedia dengan dukungan bandwidth memadai, mobilitas tinggi dan kemudahan akses. Terdapat 3 (tiga) pendekatan dari sisi teknologi untuk implementasi FMC yaitu UMA (Unlicensed Mobile Access) IMS (IP Multimedia Subsystem) dan Mobile IP.

Teknologi UMA, yang dalam standard 3GPP (3rd Generation Partnership Project) disebut GAN (General Access Network), adalah teknologi yang memungkinkan pelanggan mobile (GSM/GPRS/EDGE) dapat berkomunikasi dengan jaringan unlicensed radio dengan menggunakan handset dual-mode. IMS dibangun sebagai sebuah teknologi yang mengakomodasi fixed dan mobile network serta mampu memberikan platform layanan multimedia dalam satu sesi kontrol pada jaringan IP. Teknologi Mobile IP mengintegrasikan berbagai teknologi jaringan akses dan transport berbasis IP. Pendekatan model implementasi FMC dapat dilakukan dengan dua tahapan yaitu Pre-Convergence dan Convergence. Pada tahap pre-convergence dilakukan implementasi Mobile IP sebagai jembatan menuju tahap convergence berbasis IMS. Di tahapan ini, teknologi UMA/GAN dapat juga diterapkan sebagai teknologi antara menuju tahapan convergence dan dari sisi layanan, tahap preconvergence difokuskan pada persiapan produk dan layanan menuju tahap convergence.

Beberapa negara telah mengimplementasikan FMC dalam rangka optimalisasi infrastruktur, mempertahankan jumlah pelanggan dan ARPU serta diversifikasi produk dan layanan. Didalam Implementasi Fixed-mobile convergence perlu didukung oleh kesiapan kebijakan dari pemerintah, para penyelenggara telekomunikasi baik fixed maupun mobile serta dukungan vendor telekomunikasi. Kebijakan telekomunikasi di Indonesia yang berpedoman pada prinsip teknologi netral (neutral technology policy) sebagaimana tertuang dalam Rencana Pembangunan Jangka Panjang (RPJP) 2005-2025 diharapkan dapat lebih fleksibel dan terbuka untuk memudahkan perubahan teknologi yang cepat berubah sehingga dapat mendorong industri telekomunikasi dan percepatan pertumbuhan ekonomi nasional namun khusus terkait dengan regulasi yang mengatur tentang FMC belum ditetapkan di dalam kebijakan sektoral.
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Fixed-Mobile Convergence (FMC) represent trend development of future network with no limited access service for the consumer of network remain to (network fixed) (PSTN, ISDN, FWA, WAN / LAN, WiFi

and of Bluetooth) and consumer of mobile network (GSM, CDMA and of PCS), with existence of this convergence expected multimedia service likes voice, data and mobility can working with device (terminal), without seeing mode access and its architecture network. This FMC in the future expected can fulfill requirement of consumer with service of multimedia and support of bandwidth requirement, high mobility and easily to access. There was have three approach of technological side for FMC implementation that is UMA (Unlicensed Mobile Access) IMS (IP Multimedia Subsystem) and Mobile IP.

UMA Technology, which in standard 3GPP (3rd Generation Partnership Project) as GAN (General Access Network), is possible technology for mobile customer (GSM/GPRS/EDGE) can communicate with network of unlicensed radio by using dual-mode handset. IMS developed as a technology which accommodating of fixed and mobile network and also can give service platform of multimedia in one session control in the IP network. IP Mobile technology integrated various network technology access and transport base on IP. Approach of FMC model implementation can be done with two step that is Pre- Convergence and of Convergence. In the phase of pre-convergence can be implemented by Mobile IP as a bridge to go to phase of convergence with base on IMS. In this step, UMA technology UMA /GAN also can be applied as technology between going to next step of convergence and from service side, phase of pre-convergence focused in preparation of service and product to go to next phase of convergence.

Some country already implement of FMC technology in order to optimal of infrastructure, maintaining the amount of customer and ARPU and also diversification product and service. In the Implementation of Fixed-Mobile convergence require to be supported by readiness of policy of government, telecommunications provider fixed and mobile and also support of vendor telecommunications. Policy of telecommunications in Indonesia which directive by neutral technological principle as decanted in Long-Range Plan Development (RPJP) 2005-2025 expected to earn more flexible and open to facilitate change of technology which fast change so that can be push telecommunications industry and acceleration of growth and special national economics but related to regulation arranging about FMC not yet been specified in sectoral policy. In this thesis, would like to analyze of implication FMC implementation in Indonesia with paying attention the condition of regulation likes telecommunications structure providing, service tariff, interconnection, license and numbering by doing benchmarking with some state which have already implement by research of FMC Model implementation recommended for able to implementation in Indonesia.