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The Investment Conundrum

In this edition of the GMCQ we survey a diverse range of developments across the global media and communications industry.

Andreas Gruenwald, Dan Brenner, Jun Wei and Claudette Christian examine structural evolution in the mobile industries of China, Europe, North and South America whilst Winston Maxwell updates us the implications of one approach European telcos are taking to the net neutrality conundrum. Meanwhile we take a close look at the latest developments in online copyright infringement across key European jurisdictions and finally take a dive into the world of satellite contracting.

Individually each of these areas is critical to the future of the global industry. Together they exemplify a fundamental challenge facing the industry, its regulators and those who fund it.

This is a challenge which is already inescapable across the increasing reach of the Hogan Lovells industry team. Over the next decade it will represent the undercurrent to everything we, and our clients, do.

As Steve Kaufman and Randy Segal remind us the overriding characteristic of satellite projects is their combination of high value, extended timescales and complexity. The planning-topayback cycles would daunt many industries.

Satellite however is not alone in this. Much of the infrastructure which powers our industry, including the fixed and mobile networks which form its backbone, also demonstrate similar dynamics.

The world of content and online copyright infringement could not provide a greater contrast. Here, fast moving, ultra-flexible operators increasingly independent of any specific platform or infrastructure are rapidly becoming the norm. Innovators (legal and piratical) move as quickly; even the industry's behemoths find they must follow suit simply to survive. Any sense of stability, predictability or a long term investment cycle becomes increasingly challenging.

Yet these two worlds cannot live apart. Each is essential for the other to survive and prosper. Content may be king but, if it cannot reach its consumers, it is like the metaphorical leaf falling in the forest which no one sees or hears – robbed of any meaningful existence and so any value. But infrastructure without content is equally worthless – a road without cars.

There is a fundamental tension here and one which has the potential, at the very least, to cause massive inefficiencies. At its worst it has the potential to delay, or to seriously disrupt, the relentless onrush of progress.

What makes this challenge all the more acute is our global interconnectedness. Whilst rising to the challenge may be driven in part by competition between different governments and regulators to secure the best outcomes for their respective constituencies, ultimately the challenge does not lend itself of local solutions. To the contrary, there are increasing risks that discordant national and regional approaches will only add to the underlying problem.

The role of the lawyer in this may not immediately be obvious but it is critical. As our contributions illustrate, across the endless breadth of our practice covering the globe and every part of the communications and media industry, we see signs of the same tensions.

In the world of satellites those tensions manifest themselves in the need for contracts to be ever more flexible.

With the networks it is characterised by the search for flexible structures – cooperation is increasingly the watchword rather than the simplistic mergers of old – and new business models. The challenge for lawyers is to help deliver flexibility through dealmaking skills; for regulators it is to respond to these developments in a way which recognises they are essential whilst still ensuring compatibility with the most fundamental of regulatory principles.

Finally in the world of content we continue to pursue similar objectives but from precisely the opposite

direction. Freedom of speech, freedom to innovate, freedom to change are the watchwords here.

But how do we protect these fundamental values whilst at the same time protecting the investment – in content as well as in infrastructure – which ultimately is essential to drive the entire industry forward?



Peter Watts T +44 20 7296 2769 peter.watts@hoganlovells.com

It promises to be a fascinating decade.



Latin America: Mobile Deals Spur M&A Activity

The Latin American telecommunications market has witnessed several substantial developments in the past twelve months, particularly in the areas of wireless and 4G. In particular, rising demand for more widespread access to 4G and other wireless services has driven consolidation activity in the Latin telecoms market. This article briefly describes some developments and representative transactions of the past 12 months in Brazil, Columbia, Mexico, and Haiti.

As the economy of Brazil continues to expand, internet use and access continues to be a significant focus of activity. Online commerce in Brazil has increased 21% since 2011 (to approximately US\$18.7 billion), and the forecast is for internet penetration to increase by the end of 2012 to over 86 million people, or 42% of the population. As the demand for internet access grows, the government is focusing increasing efforts and resources on infrastructure projects, particularly wireless 4G access. In June. Brazil's telecom regulator Anatel raised US\$1.4 billion in an auction for 4G wireless frequencies. The goal of the auction was to attract new investors to the industry, and another auction is planned for early 2013. Telefônica Brasil and Claro (a subsidiary of América Móvil) were the largest bidders, while **Tim Participações** (a unit of **Telecom Italia**) and **Oi SA** also bid for large portions of the spectrum. The winning bidders will be required to provide 4G services to the six cities hosting the Confederations Cup by April of 2013, and to the twelve host cities of the World Cup in 2014. In addition, the winning bidders from the auction will be required to supply all state capitals and cities with populations over 500,000 people with 4G wireless services by 2014.

Sunrise Telecomunicações and Sky Brasil also acquired spectrum in the June auction, and will compete with the larger Brazilian providers in certain regional markets. Each of these companies was involved in a substantial investment transaction in connection with the spectrum auction. In late May, entrepreneur George Soros acquired Sunrise Telecomunicações, a Brazilian pay-TV provider that is now expanding into mobile services, in order to participate in the June auction as well as the 2013 spectrum auction. Soros promised to initially invest US\$251 million in Sunrise Telecomunicações. In the June auction, Sunrise Telecomunicações spent US\$9.3 million to acquire two 4G spectrum licenses covering 134 cities in the state of São Paulo.

In December 2011, Sky Brasil (a Brazil-based subsidiary of DirecTV), announced the purchase of **Acom Comunicações**, a Brazilian television and internet company, for US\$55 million. Completion of the acquisition is still pending, subject to antitrust and communications regulatory approvals. This deal is part of Sky Brasil's overall strategy to enhance its new 4G operations and to expand its services to other parts of Brazil. By acquiring Acom Comunicações, Sky Brasil will acquire new 4G wireless spectrum in ten states covering fifty major municipalities, to complement the airwaves it acquired in the June auction.

Outside of Brazil, other recent investments have demonstrated a trend towards greater industry consolidation. In Mexico, Televisa recently completed a deal to acquire a 50% stake in **Grupo lusacell**, a Mexican mobile operator. Publicly-traded Televisa is the largest media company in the Spanish-speaking world, and its US\$1.6 billion dollar investment in lusacell will create significant competition for Mexico's leading cellphone operator, **Telcel** (also a subsidiary of **América Móvil**). Mexico's Federal Competition Commission (CoFeCo), while supportive of the new competition in wireless, has expressed concern about the monopoly that the merger would create in the Mexican TV market, as **Grupo Salinas** (lusacell's parent company) and Televisa control almost 100% of the Mexican TV broadcasting market. As a condition to its approval of the transaction, CoFeCo required various restrictive conditions to create and maintain some level of competition in the TV broadcasting market.

Similar consolidation M&A activity has taken place in Colombia, where Colombia Telecomunicaciones, a Colombian fixed-line operator, announced its merger with mobile operator **Telefónica Móviles**, the Colombian unit of the Spanish publicly-traded telecommunications operator Telefónica, S.A. The deal closed in July, and Telefonica now holds 70% of the combined company, while the other 30% is held by the Colombian government. Under the terms of the merger, the Colombian government will take over 48% of the combined company's pension payment obligations, helping to reduce Telefonica's debt by about US\$1.7 billion. The merger has created the second largest telecommunications group in Colombia, and may help boost competition in the wireless market, as it will now offer a full range of telecommunications services.

Finally, it bears noting that not all recent M&A activity in the region has been driven solely by consolidation considerations, as there is still room for substantial expansion of basic services and technological development. In **Haiti**, privately owned **Digicel Group**, a Caribbean, Central America, and Pacific mobile phone company, and the largest mobile operator in Haiti, announced the closing of its acquisition of **Voilà**, a Haitian mobile operator, on March 30, 2012 for an undisclosed sum. The companies will continue to be run separately because Voilà's operating frequencies are not compatible with Digicel's networks, but Digicel's strategy is for the acquisition to drive new investments in increased mobile service and new technology.

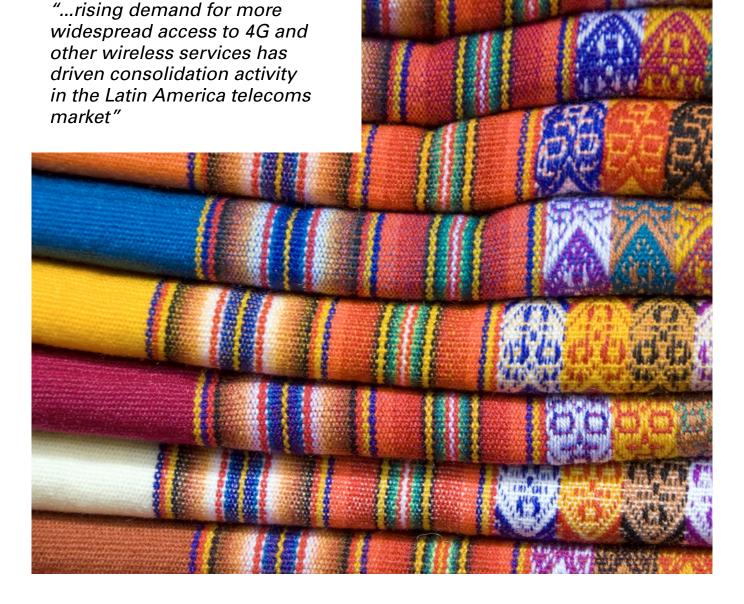


Wylie Levone
Associate, Washington D.C.
T +1 202 637 5730
wylie.levone@hoganlovells.com



Claudette Christian
Partner, Washington D.C.
T +1 202 637 5650
claudette.christian@hoganlovells.com

We are pleased to announce that we are opening a new office in Rio De Janeiro in late 2012.



China: 350,000 LTE Base Stations Planned for 2014; Investors Use "VIE" to Structure Telecom Investments

The Chinese telecommunications market developed rapidly, particularly after China's accession to the World Trade Organisation. The number of subscribers is in the hundred millions and revenue in the hundred billions (in Renminbi) as of the end of 2011. This article will discuss the general regulatory framework in relation to foreign investments in the Chinese telecommunication industry and its application to the long term evolution ("LTE") standard, which will be followed by a discussion on the impact of LTE on value added telecommunications services.

Overview of the Chinese Telecommunications Market and Industrial Regulations

The Chinese telecommunications carrier market is largely dominated by state owned enterprises, namely, China Telecommunications Corporation ("China Telecom"), China United Network Communications Group Co., Ltd. ("China Unicom"), and China Mobile Communications Corporation ("China Mobile"), which are each issued with telecommunications licences to carry fixed line network services, mobile communications network services (2G and 3G), and data communication network services.

Telecommunications operating permits must be obtained from the Ministry of Industry and Information Technology or its competent local counterparts ("MIIT") in order to provide telecommunications services in China. Telecommunications operating permits are divided into two categories, namely, basic telecommunications services ("BTS") and value added telecommunications services ("VATS"). Generally, the market entry criteria for the BTS sector are more stringent than the VATS sector. Telecommunications industrial regulations are applicable to both domestic investors and foreign investors.

Foreign Investments in the Telecommunications Industry

In addition to the aforementioned general industrial regulations, foreign investments in the telecommunications sector are subject to further rules and restriction specifically applicable to foreign investors. Foreign investors are only permitted to set up foreign invested telecommunications enterprises in joint venture with Chinese nationals (also known as "FITEs") and provided that the foreign ownership is limited to 49% for FITEs providing BTS and 50% for FITEs providing VATS. FITE is

also subject to a high capitalisation requirement. A FITE must have a minimum registered capital of RMB 1 billion (approximately USD 157.23 million) in order to carry out BTS with nationwide coverage, and RMB 100 million (approximately USD 15.72 million) in order to carry out BTS with province-wide coverage. A FITE must have a minimum registered capital of RMB 10 million (approximately USD 1.57 million) in order to carry out VATS with nationwide coverage, and RMB 1 million (approximately USD 157,233) in order to carry out VATS with provincewide coverage. Given the stringent requirements imposed on setting up a FITE and the regulatory practice which indicates the Chinese government's reluctance in granting telecommunications operating permits to FITEs, foreign investors have utilised the variable interest entity ("VIE") structure to enter China's telecommunications industry.

Under the typical VIE structure, foreign investors will engage nominees with Chinese nationality to act as shareholders of the domestic capital company holding the required telecommunications operating permits. The contractual arrangements effectively transfer the actual control and economic benefits of the business of such domestic capital company from the registered shareholders to a wholly foreignowned enterprise separately established by the foreign investor. The contractual control is normally effectuated through a number of contractual arrangements, such as, the cooperation agreement and technical services agreement, voting proxy, equity pledge agreement and equity option agreement.

While it remains the most widely used structure for foreign investments in the Chinese telecommunications industry, especially in the VATS sector, the VIE structure poses certain legal risks, including but not limited to, possible change of nominee loyalty and uncertainty of the enforceability of the control documents as a whole. In particular, the VIE structure has recently been exposed to increasing government and media attention. However, given the substantial stakes involved with the VIE structure (it is estimated that the market capitalisation of Chinese internet companies listed in the US under the VIE structure is approximately USD 160 billion), careful consideration will be exercised by the Chinese government before adopting any solution in order to avoid causing any serious disruption to the domestic and overseas markets.

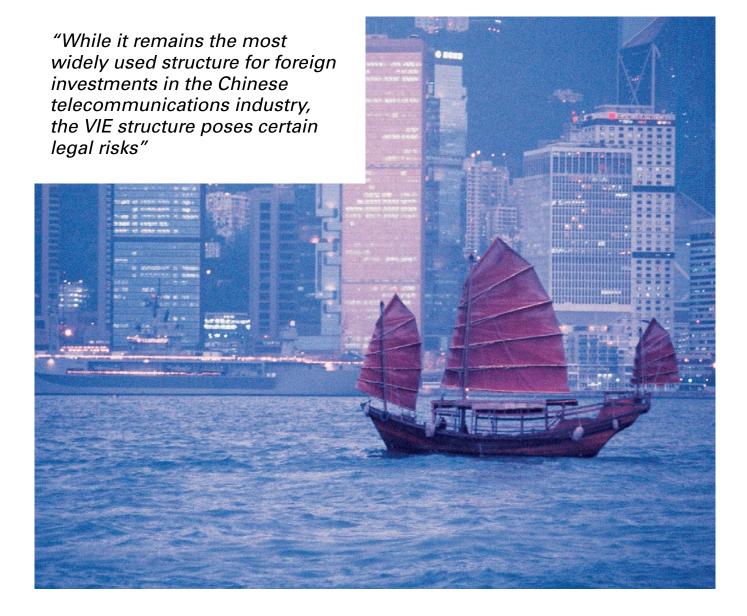
LTE

The LTE mobile service system is in a nascent but rapid stage of development in China. MIIT has approved China Mobile to construct and provide pilot LTE services in seven cities in China and the pilot services are being expanded to more than ten cities by the end of 2012. It is reported that 20,000 LTE base stations will be built by 2012 and 350,000 LTE base stations will be completed by 2014 pursuant to the development plan sanctioned by MIIT. In contrast, China Telecom operating on the CDMA 2000 standard and China Unicom operating on the WCDMA standard are focusing on expanding the 3G platform and are not proactive in developing and implementing the LTE standard.

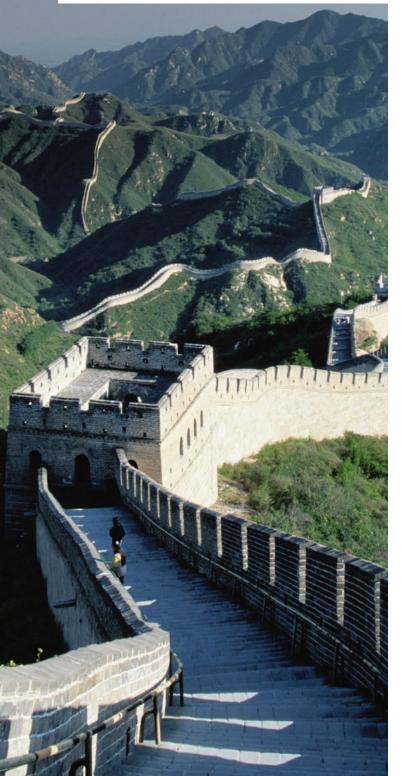
LTE services are classified as 4G mobile services by the industry in China and are likely to be subject to the BTS permit requirement. Therefore, foreign investment in a FITE providing LTE services will be subject to the minority ownership restriction and high capitalisation requirement.

Impact on VATS

The advent of 3G and 4G mobile services has provided a platform offering more customised VATS to the market, particularly the internet content provider services, to mobile device users. The commercialisation of 3G mobile services has made the use of the internet service via mobile devices more popular in China. Commercialisation of 4G



"Given that LTE will likely be classified as a BTS, it will be difficult for foreign investors to penetrate into the Chinese LTE service"



China: 350,000 LTE Base Stations Planned for 2014; Investors Use "VIE" to Structure Telecom Investments.

mobile services will further allow internet content providers to supply faster and more innovative services to internet users which will in turn attract more internet users and commerce via the mobile internet platform in China. Consequently, foreign investors are increasingly active in the VATS sector in China.

Internet content provider services cover internet information services, e-mail service, bulletin board service and the like. Internet content provider services supplied for profits are classified as a VATS and are subject the VATS permit requirement and foreign ownership restriction, although, as discussed above, the VIE structure has been commonly used by foreign investors in relation to the VATS sector.

Conclusion

The Chinese telecommunications industry is one of the fastest developing markets in the world. Due to restrictions on foreign investments in the Chinese telecommunications industry, foreign investors have adopted the VIE structure to pursue business opportunities despite the legal risks associated with such VIE structure.

LTE services are being developed by China Mobile in China, although it is expected that the full scale of investments in the LTE service will not be effectuated until China Mobile, China Telecom and China Unicom have captured satisfactory investment returns in relation to 3G services. Given that LTE will likely be classified as a BTS, it will be difficult for foreign investors to penetrate into the Chinese LTE service. However, LTE services are expected to further nurture the development of the VATS, particularly in the mobile internet sector in which foreign investors have actively pursued business opportunities through the VIE structure.



Jun Wei
Partner, Beijing
T +86 10 6582 9501
jun.wei@hoganlovells.com

Trends in Satellite Finance Video abstract

Randy Segal and Steven Kaufman at the Paris Satellite Finance Conference in September



http://www.hoganlovells.com/satellite-finance-trends

Satellite deal-makers Steven Kaufman and Randy Segal shared their insights on trends in satellite finance during the annual Satellite Finance Conference held in Paris in September. Although the market for traditional broadcasting services is soft, demand for broadband communications and new forms of digital broadcasting is strong. Kaufman and Segal stressed the importance of public financiers such as the Exlm Bank in today's satellite projects. A number of the new projects are being initiated by countries that view the ownership of a satellite system as an important element of sovereignty and national security. Later in this issue, Steve Kaufman and Randy Segal describe the keys to a successful government satellite project,

pointing out traps when governments negotiate satellite procurement contracts under government procurement regulations. Challenging aspects include inconsistencies between government procurement laws and international satellite practices, and managing the inevitable changes that will occur during the long life of the satellite project. There is also a need to build in flexibility to coordinate the satellite procurement with the other procurements which need to take place in the months or even years after the satellite procurement is completed. With numerous interrelated contracts, many things can and will go wrong, and the contracts need to cover as many of these contingencies as possible. The full article appears on page 25.

United States: A Shift to the Right-Sizing? Lessons from Recent Media & Communications Mergers

Horizontal acquisitions are premised on the ability to share fixed costs over a larger base to obtain greater operating economies. Vertical mergers also assume increased efficiency, defined by the merger's demonstration that a "buy" version by which to grow the company is better than a "make" version.

The FCC and the Department of Justice (DOJ) approved a major vertical merger in the cable industry: 2011's Comcast-NBCU merger. Last August, Verizon Wireless's (VZW) \$3.9 billion acquisition of AWS spectrum from Spectrum Co.'s three cable partners was also approved. The transaction included commercial agreements for cross-selling of products and a joint research program to harness fixed and mobile broadband innovations. (Hogan Lovells was counsel of record to Verizon Wireless before the Department of Justice and to a Spectrum Co. partner before the FCC.)

Yet, AT&T's 2011's proposed acquisition of T-Mobile was scuttled by DOJ opposition. Smaller horizontal mergers – AT&T's 2011 acquisition of Qualcomm's spectrum and T-Mobile's 2012 acquisition of spectrum as a consequence of the VZW transfer – were approved.

Is there any pattern that can assist ICT (Information/ Communications/Telecomm) companies contemplating mergers or transfers in the U.S.?

Surely, the 1980's whoop of "Synergies!" falls on deaf ears by regulators and bankers. Synergy failures, like the catastrophic 2001 Time Warner/ AOL deal, make vague public interest showings a put-on, or worse.

Nor is there a consensus that vertical integration should be an inevitable goal of ICT companies. In 2009, a year before the Comcast NBCU merger, Time Warner's cable networks and studio split off from its cable company, Time Warner Cable. The same year Viacom split, one company focused on broadcasting (CBS) and the other on cable networks and film holdings. These three respected companies have taken diverging paths toward vertical integration. And there is talk that Vivendi may seek to break itself up.

On the horizontal side, what made ATT-T-Mobile impossible but VZW/Spectrum Co. a reality? The former was a classic horizontal acquisition of existing facilities

serving existing customers; AT&T might have prevailed in litigation but declined to proceed having gauged the odds. VZW/ Spectrum Co. had easier facts: the seller had no facilities, no customers, and therefore produced no reduction in wireless competition.

Cable companies had bid and won AWS spectrum at the 2006 auction but had never figured out a successful way to create a wireless competitor and a fourth line of business to cable's TV-internet-VoIP triple play. Cox (not in Spectrum Co.) rolled out a wireless offering 2009; it failed by late 2010. If Cox, with its strong an internal telecom base, couldn't figure out how to do wireless, other cable companies, who had spent their own millions plotting a strategy, concluded that the chances of success were low. (Cox sold its spectrum to VZW when Spectrum Co. transferred its licenses.) DOJ obtained changes to the vertically-oriented commercial agreements between the parties. But the transaction was substantially completed as the parties intended.

It's the spotlight that U.S. ICT mergers and acquisitions place on emerging technologies and markets that should lead companies to think through what to expect. For instance, Comcast-NBCU's FCC approval contained procedures for online video distributors to acquire programming that might compete with Comcast's traditional cable service. Online businesses were most nascent at the time the FCC considered the merger. Those conditions have already led to skirmishes at the FCC.

In the VZW/Spectrum Co. transfer, opponents raised two issues on which the FCC declined to propose conditions – cable wireline backhaul and Wi-Fi offload. With wireline backhaul, a cable company builds a tower and wire network to transfer wireless transmissions off licensed spectrum onto its wireline network, which in some cases will build out to the tower location. It's a competitive alternative to offloading to ILEC facilities from Verizon or AT&T or to microwave offload companies.

The concern by some wireless companies is that cable companies would favor VZW in conducting this business. But as Spectrum Co. forcefully showed, cable companies have every incentive to offer backhaul to all wireless providers And they have substantial incentive, once one wireless provider is being backhauled, to add as many other providers to a backhaul tower.

"Wi-Fi offload" may be less familiar. A counterintuitive truism about the wireless business is that generally speaking, a licensed wireless network is managed to get a customer off that network as cheaply and as quickly as possible. That's because for many portions of wireless network, spectrum is expensive, scarce, and hard to increase in efficiency. Wireline offload is a big part of the solution.

Unlicensed spectrum like Wi-Fi may be another.

The cable industry has grown its Wi-Fi hot spot population, primarily to let Internet customers access their cable subscription away from home. This May, several companies created Cable Wi-Fi. Customers of, say, Comcast, can use the Wi-Fi network of Time Warner Cable when outside Comcast's territory. As that network ramps up, it could be a source for offload. So the transfer proceeding became an opportunity to seek conditions by potential users. The FCC declined. That's because cable Wi-Fi offload isn't yet a business. While the FCC will monitor developments, it correctly avoided creating conditions before a business developed.

Caution counts here, because sometimes the FCC gets conditions wrong. When the FCC approved the 2001 Time Warner/AOL merger, it imposed access conditions for what the agency FCC dreamed up as "advanced instant messaging" (AIM). AIM never developed (but texting and Twitter did). The FCC quietly removed the goofy condition in 2003. Nascent markets may be part of a merger or transfer review. ICT companies need to think through those possible conditions carefully, and regulators need to exercise caution in conditioning new businesses before they develop. The FCC's Verizon/Spectrum Co. transfer approval successfully demonstrated both results.



Daniel Brenner
Partner, Washington D.C.
T +1 202 637 5532
daniel.brenner@hoganlovells.com

"It's the spotlight that U.S. ICT mergers and acquisitions place on emerging technologies and markets that should lead companies to think through what to expect"



Europe: Mobile Mergers – Current Trends in Competition Regulation

The European mobile markets seem to be saturated. The EU-wide SIM card penetration rate stood at 127% in 2011, once more up from 123% in 2010. On the other hand, mobile broadband still benefits from booming smartphone sales. Subscriptions increased from 26.8% to 43.1% at EU level last year. There is certainly room for further growth, but here as well, margins are increasingly under pressure.

Market response is clearly a trend towards (further) consolidation:

- Already in 2007, France Télecom sold its Dutch mobile business (Orange) to competing mobile network operator (MNO) Deutsche Telekom, which reduced the number of market players in The Netherlands from four to three.
- France Télecom (Orange) and Deutsche Telekom merged their UK mobile operations in 2010, subject to EU conditions, which – post merger – left the UK market with four MNOs instead of five.
- Vodafone recently considered to combine its Greek business with Wind Hellas, which would have merger number two and number three in the market. However, the deal eventually failed because of general market uncertainties in Greece.
- KPN, in an attempt to fight a hostile take-over by Carlos Slim's América Movil group, publicly discussed a sale of its German mobile business (E-Plus) to Telefónica/O2. This deal, which for the moment is said to be off due to lack of financing, would have merged number four and number three MNOs in the German market.
- In Austria, Hutchinson3G's proposed acquisition of Orange is pending before the EU Commission, which would again reduce the number of MNOs from four to three.
- And finally, Orange intended to acquire one of its two competing MNOs in Switzerland (Sunrise), but the deal was blocked by the Swiss competition authority.

So from a regulatory perspective, what lessons can be learned as to how competition authorities address this deal activity? First, there is no consistent EU-wide regulatory approach to mobile mergers. These deals often involve multinationals with large revenues, and many mobile mergers therefore fall under EU jurisdiction. At the same time, the affected markets are typically national in scope (end customer markets, but also wholesale termination, network access and roaming markets). In essence, it therefore remains an issue of regulating national markets, where the relevant conditions may differ from Member State to Member State.

Second, and despite the fact that different national markets are affected, what can be observed is that mobile mergers typically raise similar competition issues:

- What is the relevant market? The authorities have developed an established practice on market definitions in the mobile sector. In particular, they do not distinguish between voice communication and data services, i.e. there are no separate (end customer) markets for mobile telephony and mobile broadband, and there is also no separation by type of customer (business or residential, subscription or pre-paid) or type of network (2G, 3G). Nevertheless, the emergence of new products like quadruple play bundles, LTE-based services or hybrid fixed and mobile solutions may still provide arguments in favour of an even broader market definition.
- What is the minimum number of market players to ensure effective competition and relevant consumer choice? This very much depends on the specific market characteristics and the existing allocation of market shares. Recent cases suggest that the authorities are generally less concerned about 5-to-4 or even 4-to-3 mergers (like in the UK and Dutch examples), whereas 3-to-2 consolidations (like in Switzerland) are generally still viewed critically. Nevertheless, the latter have already been accepted at least in other communications markets, e.g. by the German Federal Cartel Office in 2011 when it approved Liberty Global's acquisition of Kabel BW, a merger that narrowed an oligopoly on the broadband cable market to a duopoly.
- Does the merger take a particularly "active" player from the market? This can typically be the case in mobile markets where, say, two new market

entrants compete against two incumbents, and now the new entrants intend to merge. Under these circumstances, the (smaller) new entrants will often be the more innovative and dynamic competitors. A merger affecting an "active" player by these means may therefore have a greater anti-competitive effect than is expressed merely in terms of market share.

- What effect has the merger on the likelihood of new market entries (third parties entering the market by building their own networks)? The effect on potential competition is a standard test in merger control cases. In mobile markets, where there is anyway a trend towards market consolidation and to decreasing numbers of market players, potential competition from new market entrants is hypothetical. It seems more likely that MNOs face increasing competition from non facilities-based service providers (MVNOs) or from fixed line operators trying to expand their business to mobile communications. Such competition service providers versus network operators – may well be fostered through an MNO merger. A larger (dominant) MNO can more easily be forced through antitrust or sector-specific telecoms regulation to offer wholesale access to its network.
- Which undertakings could remedy any anticompetitive effects of a mobile merger?

 "Classic" undertakings like divestitures of business parts will typically not be an option in mobile merger cases, because by definition, the underlying rationale for these mergers is to combine the two businesses as a whole. On the other hand, at least the EU Commission is rather flexible with "behavioral" undertakings, which recently could also be found with certain member state authorities (e.g., the German Federal Cartel Office in the Liberty/Kabel BW case). With regard to mobile, this could include network sharing, MVNO access or national roaming obligations, but also price caps or spectrum sales.

Third, and to conclude, the market development is not only about mobile mergers. There are also various kinds of joint ventures either between different mobile operators or among mobile operators and other industry players: for example, the German Federal Cartel Office already in 2007 allowed three of the four German MNOs to set up a joint venture to launch

a nationwide DVB-H network for mobile television services (the project never materialized). Likewise, the Commission recently cleared a joint venture between Telefonica, Vodafone and Everything Everywhere (the combined T-Mobile/Orange operation) – i.e. of three of the four MNOs in the UK – to set up a mobile commerce platform. And even though it does not specifically concern mobile but fixed line broadband networks (xDSL, FTTx), competition authorities show some flexibility under applicable antitrust laws when it comes to network sharing in order to close certain "white spots" in remote areas which without the cooperation would not be served as well.



Andreas Grünwald
Partner, Berlin
T +49 30 726 115 357
andreas.gruenwald@hoganlovells.com

European Telcos Lobby for Better Pay; CDNs May Hold the Key

A number of incumbent European telecom operators are lobbying, via their trade association ETNO, to get more money for carrying Internet traffic. Faced with large investments in fiber, last-mile operators are seeking new sources of revenue. Competing with content delivery networks may be a promising new business model. But regulatory safeguards may be necessary.

This summer, the French digital economy Minister, Fleur Pellerin, said that France should avoid an interpretation of net neutrality which would overly favour US Internet companies to the detriment of French operators. Implicitly, the Minister is supporting the idea of reasonable compensation for French operators in the context of their commercial dealings with large over-the-top service providers, such as Google. The Minister's comments share a theme of realigning payment flows on the Internet recently proposed by ETNO, the association of European telecom operations. Its proposal would modify the International Telecommunications Union treaty to include the principle of reasonable compensation for last-mile network operators that carry Internet traffic. It would, roughly speaking, help network operators negotiate for added fees, using a "sending party pays" system similar to the model used for telephone calls. ETNO's proposal is controversial. US operators and the US government are against any modification of the ITU treaty that would open the door to regulation of the Internet. Critics fear a telecoms-style regulation of Internet traffic, as well as content-based regulations that could lead to censorship and harm freedom of expression.

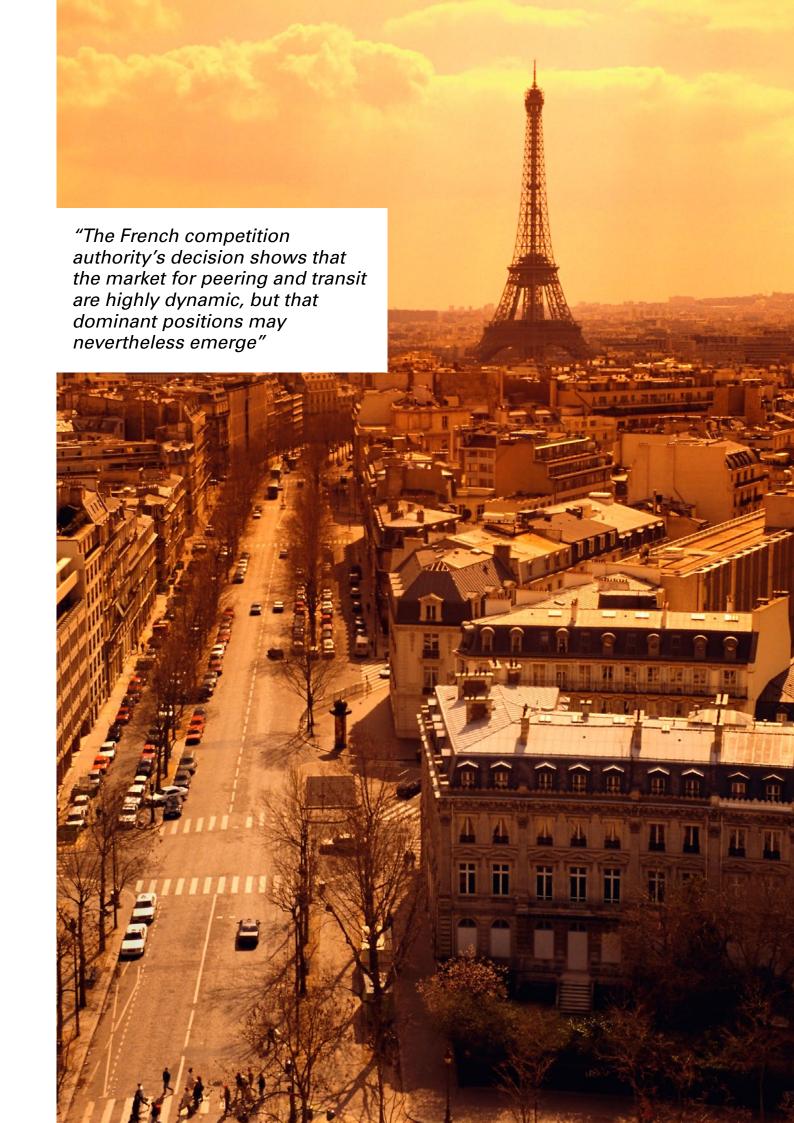
European authorities are studying the economics of Internet traffic exchange, to determine whether some form of regulation is necessary. The French regulator ARCEP recently issued an order requiring operators to provide detailed information regarding their IP transit and peering agreements. AT&T and Verizon both challenged ARCEP's order, arguing that it exceeds ARCEP's statutory authority and that IP transit and peering have not shown evidence of any market failure. Cogent filed a complaint with the French competition authority because of a problem negotiating a peering agreement with France Telecom. The French Competition Authority just released its analysis of

the case, finding that France Telecom was guilty of no abuse. The competition authority found that the relevant market consists of access to France Telecom customers via either peering or transit. In other words, peering and transit are substitutable from a demand standpoint. If this were not the case, France Telecom would have a 100% market share on the market for access to France Telecom's customers via peering with France Telecom. As it stands, the competition authority found that France Telecom held a market share of approximately 50% on the combined transit and peering market, and that given its market share, France Telecom "might" hold a dominant position. Nevertheless, Cogent was unable to show that France Telecom had abused its potential dominant position. For the competition authority, France Telecom could reasonably impose fees on Cogent to compensate for highly unbalanced traffic. To allay fears that it was guilty of margin squeeze, France Telecom volunteered to develop internal transfer price protocols between France Telecom's network division and its in house transit operator "Open Transit."

To our knowledge, this is the first time, outside the context of a merger case, that a competition authority has examined the IP peering and transit market. The Polish telecommunications regulator UKE attempted to impose obligations on the Polish incumbent operator in connection with its Internet peering agreements, but UKE's initiative was vetoed by the European Commission, in part because of defects in the definition of the relevant market.

Would it be Possible to Regulate Internet Peering and Transit Agreements in Europe?

In theory, it would be possible for telecom regulatory authorities in Europe to regulate Internet peering and transit agreements. Unlike the US, Europe makes no distinction between voice interconnection and data interconnection. Regulators in theory have jurisdiction over data interconnection. In practice, however, regulators cannot regulate unless they show an enduring market failure, or that end-to-end connectivity is jeopardized.





European Telcos Lobby for Better Pay; CDNs May Hold the Key

The first theoretical route for regulating Internet peering or transit agreements would require that the regulator identify an operator with significant market power, i.e. an operator that has the equivalent of a dominant position under competition law. This can be challenging given the many different routes that Internet traffic can follow. Moreover, large content providers may exercise countervailing buying power. Finally, the operator's own retail customers may complain and ultimately change operator if Internet traffic were disrupted. This puts a strong competitive constraint on any last mile operator that may negate any finding of dominance. The French competition authority's decision shows that the market for peering and transit are highly dynamic, but that dominant positions may nevertheless emerge. Dominance, however, is not sufficient to justify ex ante regulation under the European Framework. Regulators must also show that the market is not evolving toward competition and that competition law is not sufficient to deal with market problems. It is unclear that these two conditions would be satisfied in the Internet peering and transit market.

A second route for regulating the exchange of Internet traffic under the European framework would exist if there were a problem of end-to-end connectivity. If a problem of connectivity existed, a regulatory authority would be able to intervene and impose a form of "symmetric" regulation on all operators, whether or not they held significant market power. In the context of the exchange of Internet traffic, end-to-end connectivity never seems to be in jeopardy - at least not so far - because of the Internet's architecture. Internet traffic trends to end-run any possible obstacle that may arise, whether the obstacle is technical or results from unreasonable commercial conditions.

Because both routes of ex ante regulation are closed, the imposition of a regulated data termination tariff seems impossible without a revision of the European directives. Yet telecom operators are finding other ways to be remunerated. For major websites, ultrafast load time is critical to maximizing advertising revenues. Global content delivery networks ("CDNs") such as Akamai, EdgeCast, or Highwinds help content providers reduce load time. Certain telecom operators are beginning to compete with CDNs by offering local caching of content at low levels of the network. ARCEP recently described this

phenomenon in its report to the French Parliament. The European Commission also discussed CDNs in its July questionnaire on net neutrality.

Would Telco-Operated CDNs Raise a Regulatory Issue?

Content delivery networks help reduce load times for web pages. Advocates of strict net neutrality will argue that last-mile operators should never be able to offer CDN-type services to upstream content providers. If a telco offered this kind of CDN service on an exclusive basis to only certain content providers, regulatory authorities in Europe would no doubt interpret this as a violation of net neutrality, although even then, the service might qualify as a form of managed service. However, if the service is available to all content providers on a non-discriminatory basis, the situation would not be different from what exists today: content providers today can, and routinely do, pay independent CDNs to provide this same service.

If the telco's CDNs make use of network resources that make the telco's service better than what independent CDNs can offer, there would be a clear threat to competition that might require regulatory intervention. One could imagine requiring the operator to offer to its competitors the same network elements as it offers to its own downstream CDN service. The imposition of an unbundling obligation such as this would still require a finding that the operator holds significant market power. This in turn requires a relatively narrow definition of the relevant market for wholesale CDN inputs. If the telco's in-house CDN elements are substitutable from a demand perspective with other more traditional CDN technologies, then the scope of the market would be broad, and the telco would not have significant market power.

Page loading time has a direct impact on advertising and e-commerce revenues for any web-based service, which is why there is a vibrant market for the CDN services. A French start-up, Cedexis, has built a business of routing in real-time content providers' traffic over various competing CDNs depending on their respective performance levels at a given time and place. Large content providers may make use of several CDNs and balance traffic between them to obtain optimal page loading performance.

Last mile telecommunications operators are particularly well placed to enter the CDN market. They can store content on servers located at decentralized points in the network and potentially offer service that is superior to classic CDNs. For a regulatory standpoint, it would seem disproportionate to prohibit telcos from entering this vibrant market. However, it may prove necessary to impose non-discrimination and "equivalence of input" obligations on the relevant telco so that it provides to competing CDNs and operators the same network resources it provides to its own in-house CDN service.



Winston Maxwell
Partner, Paris
T +33 (1) 5367 4847
winston.maxwell@hoganlovells.com

"Certain telecom operators are beginning to compete with CDNs by offering local caching of content at low levels of the network"

"Page loading time has a direct impact on advertising and e-commerce revenues for any web-based service, which is why there is a vibrant market for the CDN services"

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The creative industries argue that piracy costs the industry £400m a year in lost revenue. However, attempts to introduce a legal framework to reduce online copyright infringement ('OCI') have been highly controversial and governments are struggling to find the right balance between, on the one hand, the intellectual property rights of content owners and on the other hand, both the rights of ISPs to freely operate their businesses and the fundamental rights of individuals. In June of this year, after some setbacks, OFCOM published its draft code governing the obligations imposed on ISPs under the UK Digital Economy Act, which means the UK framework for dealing with OCI will finally be set in motion. This article focuses on some of the problems which have arisen in Europe and outlines the current framework for dealing with OCI in France, Spain and the UK.

Background

In 2000 the European E-Commerce Directive established the principle of "notice and take down" procedures, giving ISPs immunity from liability except where they have been notified of infringement and do not promptly take down the content. The following year, the Information Society Directive came into force, which provided that member states must ensure that rights holders can apply for an injunction against internet intermediaries whose services are used by a third party to infringe a copyright. The IP Enforcement Directive also requires member states to ensure that measures necessary for the enforcement of intellectual property rights shall not be unnecessarily complicated or costly. The directives had to be implemented through national legislation and this has led to inconsistencies in the national legislation of member states. This is particularly problematic for large ISPs operating in several jurisdictions.

France

In 2006, France transposed into national law the Information Society Directive. The French law, called the "DADVSI" in French, crystallized debates regarding the appropriate measures that should be taken to limit OCI. A number of French parliamentarians argued that the individual downloading of copyrighted content for private purposes should be covered by a compulsory licence for private copying and not considered as infringement. In France, copyright owners already receive remuneration from blank tape levies, and those levies have been extended to apply to blank CDs and

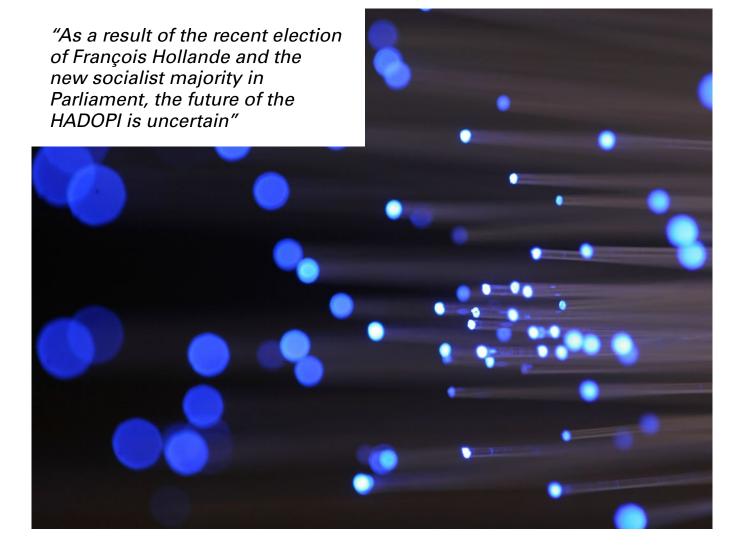
other forms of computer memory. Consequently some argued that individual file sharing should be considered a form of private copying, covered by an exception to copyright and remunerated via the private copy levy. Individual lawsuits against Internet users for file sharing in France were in some cases unsuccessful because judges balked at applying harsh infringement sanctions to teenagers who download music for personal usage. It became clear that French copyright law was illadapted to the problem of OCI, in part because France's penalties for copyright infringement were so severe.

Ultimately, the DADVSI did not create compulsory licencing for private downloading. Instead, the law contained a provision stating that individual peer-topeer downloads would no longer be considered a crime under French copyright law, but would be considered only a misdemeanour subject only to a low-level fine equivalent to a parking ticket. France's Constitutional Court held that this lightened sanction regime was unconstitutional because it created two different kinds of punishment for an act of copyright infringement depending solely of the technology used to commit the infringement. The court found that this difference in sanctions violated the constitutional principle of equality of punishment for the same offence. The DADVSI also created a new duty of care for Internet subscribers to take reasonable measures to ensure that their Internet access is not used for infringement. But this duty of care was not accompanied by any sanction and remained a dead letter in practice. Finally, the DADVSI permitted courts to prohibit the distribution of software that is principally used for infringement.

The DADVSI created a new regulatory authority, then called the "ARMT," to regulate questions linked to interoperability of technical protection measures. The ARMT was supposed to strike a balance between copyright and freedom of expression by ensuring that technical protection measures do not frustrate legitimate uses of the protected work, or prevent interoperability. However, the ARMT was not given any rulemaking authority. The ARMT was to intervene solely in individual cases, either as a mediator or as an arbitrator to order access to interoperability information in appropriate cases. The ARMT was inactive, in part because music labels did not end up making extensive use of anti-copy measures on CDs. The ARMT survived, however, and ultimately became the French regulatory authority today known as the "HADOPI."

Following adoption of the DADVSI, the French President urged right holders, ISPs and several large hosting platforms to sign a charter pursuant to which right holders undertook to make more content available for legal online offers, ISPs and other Internet platforms agreed to implement graduated response and to experiment with filtering, and the government agreed to put into place a legal framework that would support both the development of legal offers and the implementation of a graduated response regime. After signature of the Elysée Agreement, neither right holders nor ISPs took action, and waited for the government to take the first step by putting into place the promised new legal framework for graduated response. The government then proposed the controversial HADOPI law, which would introduce the graduated response regime in France, a regime that could ultimately lead to the temporary suspension of Internet access for repeat infringers.

The first version of the HADOPI law was adopted by both houses of French Parliament, but invalidated in part by the French Constitutional Court. The first version of the law had given the HADOPI administrative agency the power to order the suspension of Internet access for certain repeat infringers after a procedure in which the suspected infringer could present his or her defence. The Constitutional Court found that the suspension of Internet access constituted a serious restriction on freedom of expression and that such a serious measure should only be ordered by a judicial authority, and not by an administrative agency. After invalidation of this portion of the HADOPI law, the government introduced an amended version that provided for an expedited procedure pursuant to which a court would make the ultimate decision as to whether to suspend Internet access for repeat infringers. It is this version of the law that is in effect today.

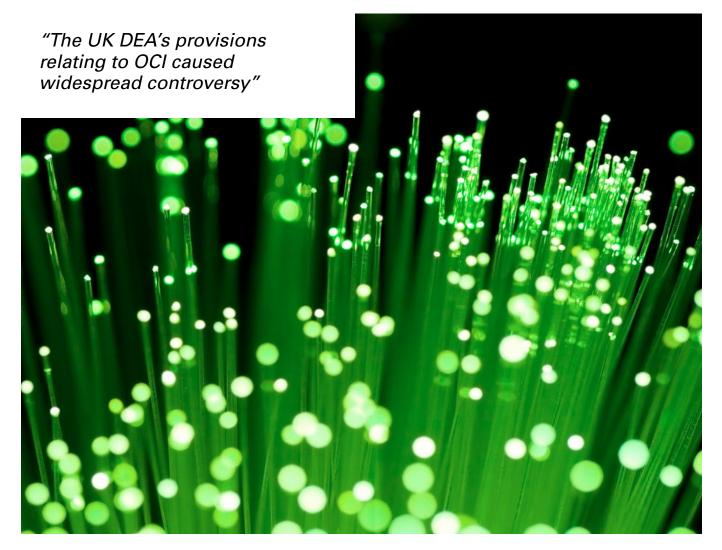


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Under the HADOPI graduated response regime, right holder organizations collect IP addresses of suspected infringers using peer-to-peer networks. The evidence is then transmitted to the HADOPI regulatory authority, who then obtains from Internet access providers the names of the subscribers corresponding to the IP addresses. The HADOPI then sends an initial e-mail to the relevant subscribers informing them of their duty to ensure that their Internet access is not used for infringing purposes, and reminding the subscriber of the existence of legal online offers. To date, the HADOPI has sent out approximately 1,000,000 first warnings. Repeat infringers then receive a registered letter from the HADOPI stating that the subscriber has been identified again as the source of infringing content, and that if the conduct does not cease the HADOPI may transmit the file to the public prosecutor for sanctions, which may include suspension of Internet access. To date approximately 100,000 registered

letters of this type have been sent. For subscribers that continue to show evidence of infringing activity, the HADOPI then selects a relatively small number of files and asks the relevant subscriber to participate in a hearing and present his views. The HADOPI then sends certain files to the public prosecutor who can then seek an order from a judge to interrupt the subscriber's Internet access. As of the date of publication, no court has ordered the suspension of any Internet access, and the HADOPI's chairperson has indicated that slightly less than 300 files are being reviewed for possible transmission to the public prosecutor.

Since the date it was created, the HADOPI has been subject to vocal criticism, particularly from advocates of Internet freedom. A number of influential members of the French socialist party criticized the HADOPI as being a waste of money, an invasion of fundamental rights and ineffective. As a result of the recent election



of the socialist François Hollande as President of France, and the new socialist majority in Parliament, the future of the HADOPI regulatory authority and of the French graduated response regime is uncertain.

UK

In the Government's Review of Intellectual Property in the UK in December 2006 (the Gowers Review) Mr Gowers reported that UK legislation, in particular s97A of the UK Copyright, Designs and Patents Act 1988, was not providing rights holders with sufficient protection against OCI (in particular illegal file-sharing). Under s97A, the High Court has the power to grant an injunction against a service provider, where that service provider has actual knowledge of another person using their service to infringe copyright. Gowers recognised that rights holders and ISPs disagreed over the interpretation and effect of s97A and it was completely untested since 2003. Consequently, in February 2008, the government said it would consult on legislation that would require ISPs and rights holders to co-operate in taking action on OCI, with a view to implementing legislation by April 2009. In July 2008 the UK's six largest ISPs signed a memorandum of understanding with industry representatives and government under which they committed to working towards a significant reduction in illegal file-sharing. Ultimately, however, the memorandum of understanding failed as rights holders and the ISPs could not agree how the costs of any measures to reduce OCI should be borne.

Consequently, the government was forced to legislate in this area and the relevant provisions were enacted in the UK Digital Economy Act 2010 ('DEA'). Throughout the DEA's passage throughout Parliament, the provisions relating to OCI caused widespread controversy and were heavily amended at each stage.

To deal with OCI, the DEA foresees two phases of regulation. The first phase consists of a mechanism pursuant to which right holders would detect the IP addresses of suspected online infringers and forward these IP addresses to the relevant ISPs. The ISPs would then send warning notices to the suspected infringers. The ISPs would also be required to provide to right holders an anonymous list of subscribers for whom the ISP had previously received a large number of infringement notices from the right holders. This anonymous list would permit right holders to go to court in order to request the name of the relevant

subscribers for the purpose of bringing individual copyright infringement actions. The second phase of regulation consists of technical measures that ISPs may be required to implement in order to limit OCI. These technical measures may include the limitation of Internet access for certain subscribers, a measure similar to the French graduated response regime.

Both phases are contingent on the adoption of detailed implementing rules by OFCOM. The DEA provides either that the detailed rules would be developed in the form of a code of conduct by industry stakeholders, a code which would then be approved by OFCOM, or in the absence of agreement by industry stakeholders, that the code would be adopted directly by OFCOM. Shortly after adoption of the DEA, OFCOM launched a public consultation regarding the draft code of practice that OFCOM intended to adopt. In the meantime, two ISPs challenged the DEA before the High Court of England on the grounds that the DEA violated several European directives and also constituted a disproportionate restriction on the fundamental rights of Internet users. The High Court validated virtually all provisions of the DEA. After the High Court's decision, the two UK ISPs lodged an appeal before the Court of Appeal. On March 6, 2012, the Court of Appeal upheld the initial decision of the High Court . Consequently it is now possible for OFCOM to adopt the initial code of obligations that would permit the first phase of the DEA to go into operation. OFCOM issued a new draft of these regulations on 26 June 2012 for public consultation. OFCOM proposes that the costs of the ISPs and OFCOM should be split 75:25 between the copyright owners and the ISPs. There is likely to be considerable debate over this proposal.

Twelve months after the initial obligations code comes into force (which is now expected to happen in 2014), OFCOM must prepare a report for the Secretary of State containing a detailed assessment as to whether the initial phase consisting of the sending of notices to subscribers has resulted in a decrease in OCI. The Secretary of State can then instruct OFCOM to conduct further assessment, including industry consultation, as to whether additional technical measures should be imposed on ISPs in order to limit the OCI. OFCOM must then prepare a report for the Secretary of State assessing the effect of various technical measures. Based on that report the Secretary of State may make an order

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that ISPs implement those technical measures. However, the Secretary of State's order would first have to be approved by both Houses of Parliament.

In addition to granting the Secretary of State the power to impose technical measures on ISPs, the DEA empowers the Secretary of State to adopt regulations regarding court injunctions requiring service providers to block access to sites for the purpose of preventing OCI. The service providers that could be affected by injunctions of this type would include publishers of websites, hosting providers, and providers of other online services. This was the most controversial aspect of the OCI provisions and was heavily watered down during its passage through Parliament. In its final form, industry must be consulted and, as with the order to impose technical measures, the Secretary of State must gain approval by both Houses of Parliament within a 60 day "super-affirmative" window. Given that Ofcom has undertaken a review of the way in which the legislation relating to blocking injunctions might work and has concluded that it is likely to be ineffective, in particular as s97A of the UK Copyright, Designs and Patents Act already provides copyright owners with a remedy, which has now been tested by rights holders with success, it seems unlikely that the Secretary of State will ever adopt any site-blocking regulations.

Spain

On 31 December 2011, the Spanish Official Gazette published the Royal Decree 1889/2011 which develops the functions of the Spanish Copyright Commission ("SCC") and implements the notice and takedown procedure for the protection of copyright on the Internet that was approved by the controversial Spanish "Sinde Act". The SCC was created within the Culture Ministry as a national agency for the defence of copyright. It was originally assigned with arbitration and mediation functions. However its role was enhanced in March 2011 by the controversial anti-Internet piracy "Sinde Act", which provided for a new notice and takedown procedure for the removal of copyright infringing content from the Internet and created a new division of the SCC ("Section Two") in charge of dealing with such procedure. However, in practice, the operation of this new Section Two of the SCC and the possibility of using the notice and takedown mechanism, was not in force until 29 February 2012.

Any online content and service provider may be affected by the new notice and takedown procedure. This includes those providing communication infrastructure and services (e.g. operators giving access to the Internet or providing mere hosting or housing services, etc.), to those allowing third parties to upload content such as social networks, blogs or marketplaces, and other service providers such as the ones providing links to third parties' content. Any individual or company engaged in the provision of Internet services may be required to suspend the connection to illicit content or take down content that has been uploaded by third parties.

The notice and takedown procedure is applicable against alleged copyright infringing activities which fulfil the following two cumulative requirements:

- a) they are carried out with a profit-making motive, or cause (or are capable of causing) a patrimonial damage (i.e. financial loss)
- b) they constitute "information society services", as this concept is used by the Spanish E-commerce Act implementing the E-commerce Directive.

"There was a strong debate in Spain on whether these websites were mere intermediaries"

Generally speaking these include most of the activities carried out by online content and service providers. The only exceptions are the providers of the so-called "intermediary services" which, under the Spanish E-commerce Act include Internet access, caching, hosting and the provision of links and search tools. Although the intermediary services providers are not the target of the notice and takedown procedure - as generally speaking, they are not liable for the copyright infringement - they may be asked to cooperate with the SCC by providing information about the alleged infringer and/or suspending access to the information society services which breach copyright.

Under the scheme, in order to report the infringement, the copyright holder must fill in an application and submit it to the SCC. The application must provide the identification of the affected copyrighted works, a description of the alleged infringement and evidence of the existence of the copyright, of the existence of the breach and of the damage or potential damage that is caused. Moreover, the copyright holder must provide any information it has regarding the relevant ISP and the intermediary service providers used by it. The SCC will then notify the relevant intermediary services providers about the initiation of the procedure on the basis of their condition as a party interested in it and to facilitate future cooperation in the identification of the alleged infringer or the removal of the illicit content. The SCC will then proceed to identify the individual or entity responsible for the alleged infringement. If the SCC is not capable of identifying the responsible party (e.g. there is not enough information available about the ISP) it will immediately refer to the Courts (in this case, the Administrative Courts) and ask them for a Court order asking the relevant intermediary services provider to provide the SCC with any data it has that may help with the identification of the relevant ISP. The intermediary services provider must fulfil the order within 48 hours.

Once the provider for the content has been identified, the SCC will notify the initiation of the notice and takedown procedure to the online content and service provider and to the relevant provider of the intermediary services. The online content and service provider has 48 hours to voluntarily remove the illicit content or activity or provide evidence in defence of the content or activity that is deemed to be illicit. If it voluntarily removes the content, the SCC will terminate the procedure and notify the interested parties (in principle, the copyright holder and the intermediary services providers). If after 48 hours the online content and service provider has not voluntary removed the illicit content or activity, the SSC will have two days to assess all the evidence and notify its result to the interested parties together with a proposal. Such interested parties will have five days to file its conclusions regarding the resolution of the SSC.

Once the five day conclusion period has elapsed, the SSC will have three days to issue a reasoned and justified final resolution. This resolution will confirm

the existence or the absence of copyright infringement. If copyright infringement is confirmed the SSC will order the online content and service provider to remove the illicit content or activity within a maximum period of 24 hours. The resolution will also be notified to the providers of the intermediary services and shall also state the suspension measures that must be implemented in order to stop the information society service through which the ISP infringes the copyright, in case a positive decision from the Courts is issued.

If, once the order of the SSC is made, the illicit content or activities are not removed within 24 hours the SSC will immediately address the competent Administrative Court and ask it to issue a Court decision that confirms or rejects the implementation of the measures proposed by the SSC in the above resolution. If the Court authorizes such measures, the Court decision shall be notified to all the interested parties and the intermediary services provider will have to implement the suspension measures proposed by the SSC within 72 hours after receipt of the notification of the Court decision, provided that the online content and service provider has not removed the illicit content or activity itself. The suspension measures applied by the intermediary services provider shall be removed if the ISP proves that the illicit activity has terminated or, in any case, one year after their implementation.

The implementation of this notice and takedown procedure has drawn some criticism in Spain.

One of the most controversial aspects relates to the consequences of the voluntary removal of the illicit content or activity by the online content and service provider. According to the law, such voluntary removal is regarded as an implicit recognition of the copyright infringement by the provider. The notice and takedown procedure is compatible with civil, criminal and administrative actions that may be filed by the copyright holders against the relevant provider. In this scenario, there is a risk that the implicit recognition of the copyright infringement that comes with the voluntary removal of the content, may be used as a base for claiming damages against the provider.

A controversial aspect of the Spanish notice and take down procedure was the application of the notice and takedown procedure to websites providing

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access to illegal content hosted by third parties. There was a strong debate in Spain on whether these websites were mere intermediaries - as they do not host the illegal content themselves - or true ISP content and service providers directly subject to the notice and takedown procedure. However, in its first decision issued by the SSC in June 2012 (case AGEDI vs. uploaded.com), the SSC has clarified that such links providers (in this case bajui. com) are mere intermediaries and, thus, not directly regarded as copyright infringers. In any case, as intermediaries, they must supress the access to the illegal content following the order of the SSC.

Conclusion

There are multiple European directives governing this area, which have all been implemented differently by member states. This has led to quite different approaches to dealing with OCI at national level. In France, the UK and Spain a regulatory authority has been entrusted with responsibility for ensuring that OCI is reduced under a regulatory framework without infringing fundamental rights. However, the obligations on ISPs, and intermediary service providers, to assist and co-operate in the reduction of OCI varies throughout Europe and remains the subject of much criticism and debate, which has stalled and delayed the progress in this area. Sadly, it will be several years before the success of these models will be seen, by which time a pan-European proposal will almost certainly be on the table from the Commission.



Penelope Thornton
Senior Associate, London
T +44 20 7296 5665
penelope.thornton@hoganlovells.com



Winston Maxwell
Partner, Paris
T +33 (1) 5367 4847
winston.maxwell@hoganlovells.com



Gonzalo Gallego
Partner, London
T +34 (91) 3498 257
gonzallo.gallego@hoganlovells.com

Satellite Systems Procurement: A Brief "How-To" Guide

Overview

The decision to commission the construction and launch of a satellite system is a multi-year strategic decision for any entity, whether commercial or governmental. Unlike many noncustomized procurements, even ones of similar expense, the procurement is only the initial phase, and after a satellite construction contract is signed the parties embark upon a multi-year collaborative journey to keep the program on schedule, on budget, and within the original performance requirements. Additionally, numerous other complicated, high risk and/or interrelated program elements must be procured, including the launch services, ground systems, handsets, insurance, tracking telemetry and control and various forms of ground support and back-office systems.

The procurement, integration and deployment of a satellite system is similar to playing a multi-level chess match, but can be successfully navigated with the right understanding of each of the elements and how they inter-react with each other. There are certainly many resources available regarding how to negotiate procurement contracts or standard terms, but there are precious few guides other than experience regarding integration of an overall satellite system across multiple years and multiple contracts.

Satellite Contracts

The satellite construction contract forms the nucleus of any satellite system acquisition. It is the most complex of all system element procurements technically, financially and legally. The terms and conditions in the contract set forth a blueprint for 3 +/- years of satellite development and delivery. Moreover, changes in technology, third party dependencies, business plans and/or other industry issues can lead to cost increases and schedule delays. Satellite manufacturers may have hundreds of subcontractors providing system components, and any number of other satellite program delays or third party component failures can impact your program.



Satellite Systems Procurement: A Brief "How-To" Guide

Each satellite manufacturer has its own form of contract, which has been reviewed extensively by its internal risk managers. To reduce procurement time, it is often best to use this form as much as practicable, although competitive procurements may end up starting with the customer's form of contract. In any event, to get the right satellite for the customer, the Statement of Work (SOW) and technical specifications will require the assistance of specialized outside consultants and will usually number into the thousands of pages.

Satellite manufacturer selection generally focuses on:

- Technical capability, satellite capacity and functionality
- Pricing
- Time requirements for delivery
- Extent of desired customization
- Launch vehicle and ground system interfaces and costs.

Satellite Contracts: Standard Terms

As one might imagine, due to the cost of building a satellite, the risk of launching a satellite, the limited maintenance options once a satellite is in orbit, and the reliance on the satellite manufacturer once selection is made, certain key contractual terms will need be carefully structured to fit with the other elements of the satellite system procurement:

• Title and risk of loss – Typically both title and risk of loss will transfer at the moment immediately prior to launch, or "Intentional Ignition;" however, title can also be transferred after in-orbit testing, but at an increased cost. This is, perhaps, one of the most fundamental of contractual concepts for the endto-end satellite procurement: neither the satellite manufacturer nor the launch services provider accept any liability for satellite or launch failures following "Intentional Ignition." The high-risk nature of the satellite industry has developed a structure that turns to satellite insurance (launch and in-orbit) for the customer's recourse for a failed launch or in-orbit failures (or "anomalies"). As a result, close attention needs to be paid the definition of the terms, triggers and times related to transfer of title, risk of loss, launch risks and insurance coverage.

Satellite contracts also need to allow for conforming amendments to ensure that the three core risk-related contracts – satellite, launch and insurance – avoid any unintended "gap" in the risk profile.

- End-to-End Integration Responsibility Few satellite contracts these days include end-toend procurement and integration elements. The primary reason is that the satellite manufacturer does not build the ground systems or provide launch services, and thus would be subcontracting these elements to an entity which is traditionally a stand-alone manufacturer. Certainly, there is a benefit to having one manufacturer perform this end-to-end integration role, including with respect to coordination of the satellite completion and the launch services, but it comes with several downside elements. First is the cost, which can be expected to be subject to a mark-up in the range of twenty-percent (or more) to compensate for the costs and risks associated with administrative oversight. Second is the distance this creates between the customer and the actual manufacturer or service provider. Communications, requests, and modifications must be made through the satellite manufacturer, and this can result in sub-optimal program management and visibility. Finally, this can result in less flexibility for the customer as to working with alternative end-user-terminal and/or ground system providers, where the core contract is less open as to the technology interfaces.
- Preliminary (or Conditional) and Final

Acceptance - Most satellite procurements have some form of ground deliverables, which can range from the very basic to the very extensive, including all ground system elements and some reference user terminals (RUT) or other non-space elements. At the time of launch of the satellite, the customer will be torn between the benefits of controlling the ground elements versus the risk of the ground system having certain elements that are not acceptable. The concepts of "preliminary" or "conditional" acceptance are often used both in the terms and conditions as well as the technical sections of a satellite contract to indicate a time in the system acceptance where the ground elements are substantially complete, with minor deviations. This concept is designed to accommodate the need to start customer operations with the customer desire

for the manufacturer to complete the remaining "punch list" of minor non-conformities. Care must be taken to consider how the pre-final acceptance period interacts with concepts of risk of loss, insurance responsibility, warranty period coverage and other contractual rights, obligations and risks.

- Post-Launch Obligations As to the satellite, the manufacturer will not have liability or obligations after the launch, except for certain anomaly and on-going insurance support. To the extent that the contract includes ground system elements and/ or certain elements with respect to end-userterminals, there will be important elements to consider with respect to both the hardware and software warranty and support. It will be important to consider the practical timing elements of these warranties, to balance the customer's desire to have access to these ground elements for testing, training and to develop other system elements, yet at the same time to ensure warranty support is maintained for a sufficient period of time postsatellite delivery to provide needed support.
- Options Careful consideration should be given at the time of negotiation of the initial contract, to identify and include those contractual options which are so necessary for customer flexibility over the construction period. Once a satellite manufacturer is selected, the customer's leverage for these manufacturer-specific items is dramatically reduced. Many of these options will relate to elements of the system other than the satellite itself (or additional satellites), such as the ability to launch on different launch vehicles besides the baseline, extended warranty services and support for ground and/or operational elements, satellite storage if there is a launch delay or other issue in the program, and various service and equipment options. In addition to seeking the longest exercise periods and the most favorable fixed prices, the customer may want to focus on the riskiest areas of the proposed system and try to build in extra flexibility through having additional options.
- Contract Change Clauses Careful consideration must also be given to the provisions and processes for contract changes. Once a contract is executed, as a practical matter it is very difficult to have anyone perform desired system changes other than the

existing manufacturer (even though many satellite contracts contain negotiated "cover" remedies in which a replacement manufacturer in theory is obtained to complete the satellite construction), so flexibility in the form of a good "changes" clause is a necessity. Many first-time customers start with the simple but unrealistic plan not to make any changes throughout the life of a program. That is very seldom possible due to the complexity of satellite programs, lack of clarity as to end-user requirements, changes in technology or program requirements not fully understood at the initial stages for a program that will continue for 3+/- years and a wide variety of other practical considerations. As a result, it is important at minimum to include a provision permitting fairly broad latitude for directed changes and "equitable" adjustments of cost/ schedule if changes would result in increases (or decreases) over the baseline program. Further, it is highly beneficial to have a provision that indicates that in case of a dispute over the equitable adjustment, the manufacturer will implement the change and the cost can be later disputed without waiver by the customer. This provision is often important in keeping the satellite construction in sync with the other elements of the program.

• In-orbit incentives (or warranty payback) – Many satellite contracts include in-orbit incentives which are earned based on the performance of the satellite over a given number of years. Conversely, the contract may have warranty paybacks where the manufacturer must repay a certain amount of money based on failures of part of the communications capability of the satellite. This is a desirable term for a customer and provides a form of financing on favorable economic terms, and also maintains a degree of customer leverage over the manufacturer for continued support during the life of the satellite. To get the most mileage out of these provisions, they will need to be tied into expected insurance loss formulas.



 Liquidated Damages and Late Delivery **Termination** – Most satellite contracts limit customer recourse for late delivery to two elements. First, there is typically a provision for liquidated damages, and negotiations typically involve discussions of grace period, the absolute amount of damages and over what period of time (e.g., 180 days), and the slope of the payment during the applicable period (e.g., evenly assessed versus its increase and decrease over time). Second, there is often a customer right to terminate the satellite contract for late delivery after the end of the liquidated damages period, and for return of the payments made by the customer to the manufacturer. These two penalties present significant issues for both the customer and manufacturer. There is typically an offset in the schedule delay caused by customer-furnished items, which generally is defined to include the other elements of the satellite system, as well as force majeure and/or other arguments as to excusable delays relating to matters other than the satellite itself.

Given the complexity of a satellite program, and the interrelationships with other contracts (including the launch services contract), often there are disagreements as to liquidated damages and offset against any customer attributed delays, and managing potential claims for liquidated damages is a key item for both the customer and the manufacturer during the construction period. This can be exacerbated for satellite programs that run significantly over budget so that payment by the manufacturer of liquidated damages would eliminate much of the program margin or profit. Even more significantly, a leverage battle arises since most customers cannot as a business matter exercise the termination right for late delivery, but if a customer does assert a termination right, the result can be a very significant liability for the manufacturer and a satellite that is not useable for any obvious alternative purpose without significant additional changes and investment. As a result, issues with respect to late delivery figure prominently both in contract discussions and in program management.

Launch Service Contracts

Unlike the satellite procurement contract where specifications are carefully crafted by the purchaser, launch vehicle contracts are for standard services and relate to standard launch vehicles. Other than price, negotiations generally center on the launch slot given to the customer on the launch service provider's manifest. Once again, significant coordination efforts are needed by the purchaser to ensure the seamless integration of satellite delivery, launch slot and insurance obligations and to avoid unnecessary delays in operating the satellite, unnecessary costs for missing deadlines, or gaps in insurance coverage.

In an effort to reduce costs, some purchasers opt for a "co-passenger" with another satellite, for certain launch vehicles designed to launch two satellites simultaneously. This approach saves on costs but does place the schedule at increased risk of delay in the event one of the two satellites is not to be launched at the same time as the other. Coordination is also needed with regard to managing launch risk. Similar to satellite construction contracts, launch service contracts strictly limit liability, and for launch services, the launcher's liability is generally limited to a re-launch at a stated cost that can be insured. This effectively creates a partial overlap between the launch services contract remedy and launch insurance which may need to be managed for optimal efficiency.

Launch and In-Orbit Insurance

As previously mentioned, except for in-orbit incentives or warranty paybacks, the satellite manufacturer's liability terminates upon launch. Similarly, the launch service provider's liability is limited to the cost of a re-launch, and then only if the option is triggered within the relevant time. When examined together, the procurer must ask what they are to do if the satellite does not perform as intended once in orbit. The answer is generally limited to insurance, although the insurance process is anything but simple.

Early in the satellite procurement process, it is recommended that a decision be made as to the insurance broker. Due to the specialization of the industry, there are a limited number of major satellite brokers – principally Aon/ISB; Marsh; and Willis – each

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of which markets to the same insurance underwriters. Typically the cost of brokers is not relevant to the procurer as it is paid by insurers from an insurance premium, which can cause some difficulties in government procurement.

Although the selection of the broker is done early in the procurement process, the actual insurance placement takes place typically a year or so prior to satellite launch per standard insurance placement processes.

Throughout this process, the broker prepares business and technical presentations to insurers with the assistance of the satellite manufacturer, launch service provider, and customer. The most important element of the insurance policy is the "loss formula" and what losses will result in partial and/or total constructive losses. The development of a loss formula is a complex technical-business-financial undertaking to determine what elements of a possible satellite failure will reasonably cause what business-financial harm, what elements of the satellite performance are most worth insuring, and what the insurance community will accept as reasonable losses for such failures. The customer is intimately involved in making key decisions related to loss formula, deductibles, and the amount insured.

As mentioned above, insurance timing and attachment of risk, coverage and payments must match risk of loss and transfer of title in the satellite contract and launch services contracts. Typically insurance is placed to cover the launch plus one year of "in-orbit" operations. Brokers typically remain with the program throughout ongoing insurance renewals, but the client can change brokers for in-orbit placements. It is also critical both during the insurance placement process, and following launch, to ensure full information to your broker on contract amendments, waivers and/or other technical issues that arise during the program and post-launch so that the required updates to the insurers can be made so as to avoid any claim as to non-coverage. The care and feeding of the insurance syndicate is an important element during the satellite construction phase.

Ground Systems

Once the satellite is launched and operating, it must have ground equipment to support its functionality. Although the satellite procurement receives much of the focus of the procurement effort, ground system specifications also must be development and implemented. The first step in determining ground systems technical specifications is determining the needs of the eventual end-users of the satellite capacity. End-user requirements must drive the design of the ground equipment and end-user-terminals, which must drive the design of the satellite, so it is critical to ensure that the ground system is not an afterthought. If the procured satellite system uses standard functionality, then the ground system and handsets/terminals are often a "commodity" procurement focused on price, quantity, schedule, termination and options. However, if the satellite is a customized system, the procurement of the supporting ground infrastructure is more developmental, and is driven by schedule and achievability.

Certain segments of the ground communication system can be procured as part of the satellite procurement, ground system procurement, or separately, including:

- Antenna(s) and pads
- SOC and NOC
- Tracking Telemetry and Control, which may be outsourced
- End-user terminals/handsets/equipment
- Back-Office and other Service Systems.

Special Note on Government Procurement of Satellite Systems

In addition to the issues set forth above that are applicable to all satellite procurements, there are even more complex considerations in the case of international government satellite procurements. This results from the inevitable differences that exist between applicable government procurement rules (both procedural and substantive) and the customary practices and contracting terms within the satellite industry.

Unlike most commercial acquisitions, complex government procurements often have unique and stringent procedural procurement rules that were not designed with satellite procurements in mind, and give rise to tensions that need to be carefully addressed. And the practices of the satellite industry are not mere custom, but the results of years of risk assessment by manufacturers, industry

experts and insurers, so change is both difficult and likely to result in significant changes to pricing.

Resolving these inconsistences requires planning and coordination between the local procurement experts, whose expertise is critical to understanding each unique government process and what changes can be made, and outside satellite counsel, whose knowledge of the satellite industry and manufacturers flexibility, can help lead to a smoother, more timely, and more cost-effective procurement. The earlier in the procurement process these inconsistencies can be identified and a plan for resolving them developed, the more flexibility will be afforded to the team in crafting a procurement strategy that meets all government procurement obligations, while deviating as little as possible from the norms of the satellite industry.

It is critical to understand the RFP process with local procurement experts, because the process can materially affect the substantive outcome. While procurement processes are intended to ensure transparency and to optimize the best results for the government purchaser, when inflexibly or reflexively applied to the satellite procurement process it typically will result in suboptimal financial, technical and legal terms. There are many different ways to work with local procurement experts through careful pre-planning to achieve a solution that is both acceptable under local law and obtains the desired results for the government client.

Included in this understanding of the RFP process is a need to thoroughly understand the process and timing for any changes to be made to the procurement documents, and the various government approvals required at each stage of the process, including budgetary approvals. Often, procurements for governments are very time sensitive, especially around changes of administrations. A need to republish a procurement and start anew can translate to the entire loss of a window for the program.

Government procurement rules may not be highly developed or define particularly well which substantive requirements are mandatory, optional and/or may be construed to be in the "spirit of" rather than strictly implemented. There may be internal processes,

approvals, or exceptions that may be available as well to avoid those government procurement terms that are not compatible with a robust and beneficial satellite procurement effort.

The cost of bidding for a satellite contract, particularly on a government contract, is very high and can cost a manufacturer anywhere up to a range of \$500,000 to \$1 million. Accordingly, if a satellite manufacturer does not believe that the government procurement rules can accommodate a risk profile in its comfort zone, then the government procurement may result in a very limited number of bidders, a failed procurement and/or highly unattractive terms. It is critical to consider not only the substantive considerations and tradeoffs, but also the procedural elements of government procurement in order to achieve a successful procurement. Satellite manufacturers will "no bid" (or present an exorbitant bid) if the government procurement process presents significant departures from customary risk patterns.

As is the case in most major system acquisitions, each decision impacts several other decisions. Therefore, it is best to look at the government procurement of a satellite as a multi-level chess match where each decision represents a tradeoff that will impact decisions with respect to other substantive terms or processes. The following chart highlights some of the substantive and procedural considerations a government entity should bear in mind from the onset of a satellite procurement.

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Substantive Considerations For Government Procurements

- Title/Risk of Loss/Insurance/Warranty The typical satellite contract structure, and how title/risk of loss/ insurance/warranty issues are handled, is not contemplated by the typical government procurement process. Up-front planning is critical to determine how the procurement laws can be interpreted and/or exceptions made to allow for these terms.
- Limitations on Liability Strict limitations of liability so common in the satellite industry are not typical for government procurement contracts.
- Indemnification Satellite manufacturers and launch service providers require indemnification under certain circumstances from the procurer. Some government procurement rules do not, on their face, contemplate the government entity accepting any indemnification obligations.
- Bonds Performance bonds and payment bonds are
 often contemplated by government procurements.
 There will be an impact on the cost of the procurement,
 the payment schedule, or other financial or schedule
 terms to accommodate this requirement, particularly
 if the choice of law and forum is in a non-neutral
 jurisdiction.
- Termination rights Often government procurement, and general government laws, contemplate that the sovereign has the right to terminate contracts when it is in the national interest to do so. This essentially needs to be considered a termination for convenience provision, for all intents and purposes, which is quite familiar to all satellite manufacturers. The key difference, however, is in the contemplated termination payments, and in obtaining the flexibility to use the more familiar termination schedule. If this is not possible, one trade-off is that the milestone schedule may be more front-ended, which in turn may lead to issues with respect to providing an advance payment bond.

- Contract Currency Some government contracts may have required provisions as to portions (or all) of payments being made in local currency. This can significantly increase the price and/or affect the number of bidders to a procurement.
- Liquidated Damages Manufacturers will be subject to liquidated damages for late deliveries, which usually increase periodically after a grace period. If a grace period is not allowed, the schedule and cost will be impacted. Further, typically liquidated damages are only payable with respect to major system delivery elements at the time of their preliminary or final acceptance, and not for individual milestones and/or individual components. If the government procurement rules contemplate higher payment structures, individually-assessed penalties and/or steep penalties, this can similarly affect the schedule and/or cost commitments under the contract.
- Choice of Law and Jurisdiction The requirement to select local law may increase the perceived risk of other elements required by local law, such as performance or advance payment bonds, limitation of liability and other government protective provisions. This can have a significant impact on how the potential bidder views any unusual substantive terms, and how the bidder prices or structures the bid in return.

Procedural Considerations For Government Procurements

- RFP Process Typical government RFP processes have limitations on "negotiations" and best and final offers ("BAFOs"), and also specifically prescribe how technical and financial evaluations of bids are to be made. A commercial satellite procurement can obtain significantly more beneficial terms through negotiations, BAFOs and consideration of technical capability differences (including satellite capacity), but these techniques often do not lend themselves to rigid or "pass/fail" criteria so common in government procurements. While government processes may contemplate "clarification meetings" with all bidders, this may not provide sufficient flexibility for reaching optimal terms.
- Personal Liability and Risk—Government officials that are responsible for a satellite program often face personal liability, including criminal liability, for program decisions. Often, these programs are subject to strict annual audits. This potential for liability heightens the scrutiny required by outside counsel to ensure actions taken in achieving the best program results are also ones which do not expose the program leaders to risk, and requires additional sensitivity as to process, drafting of substantive provisions and to the required supporting documentation.
- Process Differences for Approvals and Signatures For example, special "apostille" or authorized translations may be required, contracts may be required to be physically signed either in the local jurisdiction or in the jurisdiction selected under the contract for the signing to be effective. Special requirements may exist as to initialing pages of contracts, and/or who can sign or approve ongoing program management efforts. These additional process differences do not typically affect substance, but may have significant time, logistical or cost impacts.

- Contract Changes, Amendments, and Waivers Significant up-front consideration needs to be given to what the process will be under applicable government rules for changes, amendments and waivers to the contract, including who is authorized to sign, receiving budgetary approvals for increase, and any obligations as to competitive bidding of changes (which is generally not feasible as the changes are manufacturer-specific). This needs to be considered in light of the customer delays that the inability to make decisions may cause, as well as the inevitable need to adjust to changes throughout a satellite program. Further, this will be affected by any applicable prohibitions on waivers without any discernible benefit to the government.
- Fixed Prices, Taxes and Importation Government procurement rules often contain special provisions as to how expenses, including value-added tax (VAT) and importation obligations, will be addressed. It is important to pay close attention to the processes in place to address these requirements, because they can significantly impact the program.

A Word About "Everything Else Satellite"

The success of a satellite procurement is dependent on many other governmental, regulatory, spectrum and financial considerations. Typically, satellite manufacturing programs require compliance with US ITAR requirements, and obtaining a host of technical assistance agreement and other export approvals. Licenses from several regulatory administrations are required, as is obtaining an orbital slot and spectrum licenses and frequency coordination. Financing a satellite system can be a daunting undertaking, and can be assisted by the various government export administrations including Coface, Ex-Im Bank and Export Development Canada, which will finance French satellite program, US content and Canadian contracts, respectively. These elements, significant in their own right, also impact the satellite procurement process.

Summary of Best Practices and Takeaways

The decision to commission the construction and launch of a satellite is a multi-year strategic decision for any entity, where the parties will continue a multi-year collaborative process which is unlike any other. The parties' efforts will extend far beyond the normal contract selection, execution, and monitoring, with both parties working to keep the program on schedule, on budget, and within the original performance requirements. The following are the key takeaways that underpin a successful satellite procurement for any entity:

- Successful planning and coordination between the internal business, procurement and contracts team and outside counsel with satellite industry expertise is critical.
- Satellite procurements involve numerous riskbased contract issues, including provisions as to title, risk of loss, and limitation of liability, which arise from legitimate risk management practices and cannot just be negotiated.
- Satellite system procurements are not just a series
 of consecutive purchases, but a coherent whole,
 and participants need to ensure the seamless
 integration of all program and contractual elements
 from a technical, risk, business and legal standpoint.

- Changes and mistakes even on relatively minor issues can have large impact due to the high costs involved.
- Satellite industry practices are not innately consistent with government procurement processes, and must be reconciled early in the procurement process.
- Flexibility and pre-planning are key in obtaining the best possible terms and conditions.
- A satellite program is dynamic over the full cycle of system construction, going well beyond contract execution and monitoring, and must accommodate contract change notices, options, waivers, termination flexibility, and intensive program management throughout 3+/- year cycle of program development and deployment.
- Programs are extremely tight avoiding delays and cost increases requires constant vigilance, crisp commercial decision making, and a minimum of post-contract changes.
- All programs are customized to some extent and contain development risk.
- The key role played by insurance shows high level of risk inherent in satellite programs compared to other procurements.



Steven Kaufman
Partner, Washington D.C.
T +1 202 637 5726
steven.kaufman@hoganlovells.com



Randy Segal
Partner, Northern Virginia Office
T +1 703 610 6237
randy.segal@hoganlovells.com



Clyde Crane IV
Associate, Northern Virginia Office
T +1 703 610 6233
clyde.craneiv@hoganlovells.com

Notes

www.hoganlovells.com

Hogan Lovells has offices in:

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