

How To Negotiate Wireless Infrastructure Agreements

By **Walt Sapronov and Kenneth Klatt** (March 15, 2018, 5:34 PM EDT)

The much publicized “5G” networks supporting the winter Olympics show how quickly the demand for advanced wireless technology is accelerating. Operating in ultra-high millimeter wave frequencies and designed to support exponentially higher mobile data volumes and bandwidth requirements, these new wireless networks are also creating increased demand for wireless infrastructure: antennas, cell-sites, pole attachments and fiber.

Historically, that infrastructure was owned and deployed by the mobile operators (“MOs”). Those economics have changed. Consumer mobile usage and smart phone purchases have limits: even as the average mobile revenues of AT&T, Verizon and other MOs have flattened, their capital budgets are constrained by cost outlays for antenna and cell site access to Crown Castle and others. In a word, reducing these costs through infrastructure sharing by MOs makes economic sense.

For airports, hotels, stadiums, malls, hospitals and similar public venues, this creates an opportunity to monetize the anticipated wireless demand — and to improve mobile services for the venue’s employees, customers or guests — by literally taking ownership of this shared wireless infrastructure. Simply stated, the venue owner or its third-party integrator (for our purposes here, a “sponsor”) builds and becomes the manager of the infrastructure — sometimes referred to as a “neutral host” — that is shared by multiple MOs to serve subscribers at the venue.

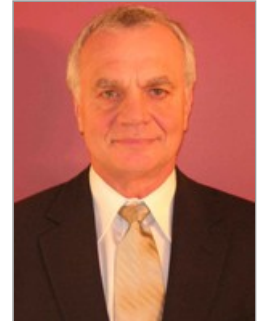
Simple though the concept may be, the contract structure supporting a neutral host system is anything but. This article discusses some key deal points in negotiating shared wireless infrastructure contracts in large venues from the sponsor’s perspective.

Wireless Neutral Host Agreements: Contract Structure and Deal Points

Neutral host environments differ from vendor-controlled ones. The key advantage of the “neutral” approach for the MOs is obvious: they need not rely on use of infrastructure supplied by one of their competitors. Setting aside economics (who pays for the DAS, Wi-Fi routers, cabling and other infrastructure and how), the overarching contract issue for the sponsor and the MOs is how to share it.

Neutral host systems for public venues vary by technology. Some use licensed spectrum bands to transmit signals, others, such as carrier grade Wi-Fi networks, use unlicensed spectrum, all requiring coordination and interference protection. The DAS system, for instance, will typically include a head-end, fiber network cabling, antennas and a distribution point for interconnection with mobile back-haul networks. The Wi-Fi network will include routers, access points, cabling — as well as software-controlled authentication and identification of mobile users seeking to use the venue’s Wi-Fi network.

In some venues, the owner will outsource the network implementation, maintenance and optimization to an experienced third party (e.g., a tower company). In others, the owner or its landlord will assume these duties. There will be multiple agreements between the sponsor (as licensor) and each of the MO tenants (as licensees). Here is a very brief sketch of how the sharing



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relationship typically works.

Contract Structure

For starters, the contract structure — compared to the familiar enterprise telecom sourcing agreement — is atypical, and begins with the battle of the forms.

Unlike enterprise sourcing or mobile procurement contracts where negotiations almost always begin with the carrier's forms, here the sponsor will insist on using its form of agreement. The simple reason: negotiating multiple carriers' form of agreement, each drafted in their respective favor, is both inconsistent with a "neutral" (or non-discriminatory) sharing arrangement and, for the sponsor, is administratively difficult, if not impossible. Unlike the MOs, the sponsor does not have countless administrative staff and contract management personnel to track multiple, different agreements. Thus, contentious though they may be, negotiations generally start with a sponsor-supplied "master agreement" template with uniform general terms and conditions. Once that framework is accepted, MO-specific terms and requirements can be addressed and negotiated in attachments.

The contract will provide for the non-exclusive use of the sponsor's facilities by multiple carriers. As with a landlord-tenant relationship, however, each MO will want exclusive use, quiet enjoyment and other occupancy rights for its licensed space so that it may place its respective equipment in the venue.

Deal Points

Familiar landlord/tenant issues here include site preparation, environmental conditions and power supply. Shared sponsor facilities will be spelled out in the agreement and include, inter alia, the head-end, antennae and fiber optic cable for signal distribution throughout the venue. The definition of permitted "equipment" that the MO may place and use in its licensed space should be both narrow and specific: examples include preapproved RF equipment and coaxial cable to the incumbent telephone carrier's (or other provider's) point of interconnection. The sponsor will also want to retain rights to relocate the headend as well as other system equipment, subject to compatibility for use and assurances that system use will not be interrupted or diminished.

License term, renewal and termination — both voluntary (such as agreement expiration) and involuntary (for breach or condemnation) — are all familiar points of negotiation in such agreements. The contract term should be sufficiently long for the sponsor to amortize the infrastructure costs, and will commonly include an annual escalator of recurring fees. Renewal — or not — should be addressed by contract notice requirements well in advance of contract expiration, giving both parties ample time to remove the MO equipment and refurbish the carrier space. Holdover rights are negotiable and equipment not removed from the MO's space should be deemed abandoned.

The contract here thus resembles a commercial lease — although the sponsor will seek to limit the MO's occupancy rights to those of a licensee, not a leasehold interest. In any event, the MO's occupancy rights will be subordinate to that of the venue's ultimate owner and its lenders. Thus, the sponsor would resist granting the MO broad venue access rights — such as 24/7 access to its licensed space — that are typically sought in carrier hosting or colocation arrangements. The agreement will also limit the MO's use of common areas and parking lots, cross-connection to other MOs and ownership of improvements (i.e., as fixtures except for the MO's preapproved, installed equipment). The sponsor also will resist any perfection of occupancy rights through recording instruments or subordination and nondisturbance agreements.

The sponsor's infrastructure maintenance and other support obligations, typically priced as a monthly recurring fee, should be spelled out in an attachment. These would include maintaining the headend, repair and replacement of parts, OEM (third party equipment) warranty maintenance and remote system monitoring.

Controlling the Mobile Operator

Given that the sponsor must negotiate multiple sharing agreements, its chief objective in the negotiations will be to control each MO's performance and use of the venue's network. Thus, the sponsor will seek tight reins over the type of carrier equipment placed in the MO's space, including

restrictions on upgrades, as well as to each MO's use of and connection to the headend.

While the MO will seek to maintain its own equipment, the sponsor will require emergency access and, if needed, emergency shut-down rights. Security will be a key concern, as will indemnification from the MOs — not just for customary property damage and personal injury damages, but also for (not so customary) privacy or data breach violations that may occur through hacking or other cyberattacks on the MO's network. The agreement should also cover each MO's compliance with its confidentiality and data breach notification obligations under federal and state laws. The sponsor may also seek to have the MO cut-off third party privacy actions against the sponsor through liability limitations in carriers' privacy policies (similar to those typically found in telephone company service guides).

Further, the MO's quiet enjoyment of the space should be subject to strict compliance with the sponsor's policies, and conditioned upon no interference with the rights of others in the venue. Additional related terms will likely include insurance, waiver of subrogation and assignment restrictions.

Importantly, while each MO will have exclusive use of its headend space, such use should be limited to its then current wireless service technology. The value proposition of the neutral host for the MO is that it functions essentially as a high-powered antenna, one that replaces more costly towers and other transmission facilities serving the carrier's "macro" network. Thus, the MO's rights to migrate to future mobile services and technologies (a so-called "technology upgrade" right) should be subject not only to the sponsor's discretion and consent, but also to a reasonable rate increase or other consideration commensurate with the value of the tower replacement.

Regulatory considerations are also important. Representations and warranties should include compliance with the Federal Communications Commission's and other regulatory agencies' regulations necessary for the provision of wireless transmission, an issue made more complicated by so-called "net neutrality," an FCC regulatory policy that (until recently)[1] had imposed utility type regulation on broadband wireless communications. The MO's related obligations here should include defense before regulatory agencies, not just general indemnification and hold harmless obligations.

Technology, Performance and SLAs

Here comes the hard part.

The sponsor will grant each of the MOs the right to use the DAS, Wi-Fi or other infrastructure to deliver RF signals using industry-standard protocols within the venue. The neutral host agreement must include measurement and testing procedures to determine whether the wireless signals meet appropriate signal strength and quality specifications. Reducing these specifications to writing, along with remedies for failure to meet them (all commonly referred to as service level agreements or "SLAs") can be a drafting challenge.

Further, while licensed carrier communications (e.g., CDMA, UMTS, EV-DO, LTE) are restricted to operation within defined slots of airwaves or licensed "bands," unlicensed communications (e.g., Wi-Fi, LTE-U) by definition are not so restricted. While unlicensed devices must comply with FCC emission, certification and signal power standards, users are not assigned specific frequencies; rather, the signals are transmitted over a wireless pool or "commons." Transmission standards for such unlicensed transmissions are often based on "listen before you talk" protocols, raising the potential for interference and dropped calls while reducing transmission quality. That makes crafting SLAs for unlicensed transmission operation especially challenging.

Complicating matters further, new transmission protocols such as Wi-Fi "2.0" are not necessarily downward compatible with older ones, thus creating potential authentication or other transmission problems when intermixed over common facilities. Thus, the sponsor should limit or, at a minimum, pay careful attention to the MO's technology upgrade rights when negotiating an agreement involving unlicensed spectrum.

And that raises one of the most critical issues in any agreement: how to deal with radio frequency (RF) interference by the MOs with one another — and with other mobile devices in the venue. Managing such interference among multiple MOs is like herding cats. But failing to do so can have

severe consequences.

First, willful interference with radio transmissions is a violation of the Federal Communications Act and FCC rules. Second, permitting such interference by one of the MOs would (probably) put the sponsor in breach of its agreements with the others. Third, uncontrolled interference with wireless signals would also damage the venue's reputation with its visitors, attendees and other invitees. Strict covenants with interference restrictions — together with prompt notice, cure and (if need be) shut down procedures — are a must.

In sum, technology specifications, upgrades and interference protection are key considerations for the sponsor in negotiating neutral host agreements. The sponsor should carefully review and impose use and upgrade restrictions on the type of wireless technology that the MO may deploy in the facility, as would any landlord on use of building facilities by its tenants. Technology upgrades (for example, to 5G) should require sponsor consent, along with a reasonable increase in consideration paid reflecting the value of the upgraded technology to the MO. Interference protection and mitigation, with or without technology upgrades, should be carefully considered, negotiated and drafted to ensure a smoothly functioning wireless system that meets the expectations of all the parties and, as importantly, of everyone using a mobile device in the venue.

For more information on this topic, please visit [Law Seminars International](#).

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[1] See, Restoring Internet Freedom, Declaratory Ruling, Report & Order and Order, 83 FR 7852 (Feb. 2018) (relieving broadband internet access providers from common carrier regulations that had been imposed by the FCC under the Obama administration) (appeals pending).