

Infrastructure theory and access to essential IP

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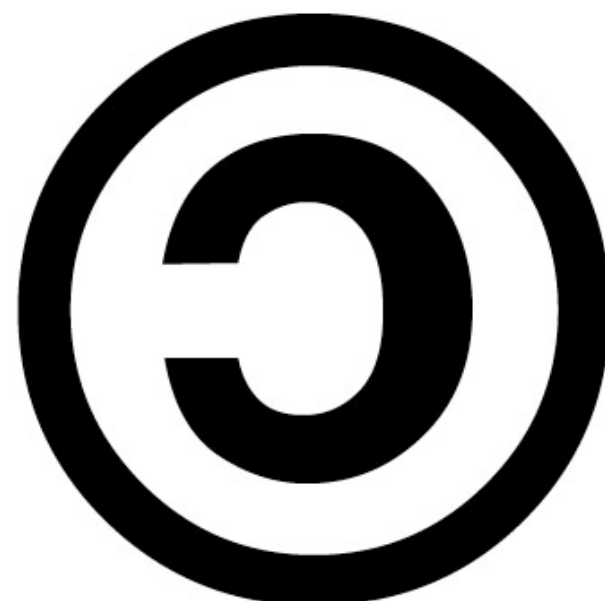
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Balancing exclusion and access

Doctrine	Exclusion	Access
Genericide	Lipitor	Aspirin
Idea- Expression	West Side Story	Star crossed lovers
Natural Principle	Nuclear reactor	$E=mc^2$
Essential facility	A railroad bridge	The only railroad bridge

What is infrastructure?

A demand side view

1. The resource (R) can be shared
 - R is at least partially non-rival (e.g., sharing of a car is rival, of a road is subject to congestion, of an idea is entirely non-rival)
2. R is an intermediate good (not merely for consumption)
3. R enables diverse downstream production of commercial, public, and/or social goods that generate significant positive externalities
 - The value of the positive externalities downstream is not fully reflected in demand for R
 - Market failure / underproduction of public goods situation (which is why many infrastructure resources have traditionally been provided by the government)

The essential facilities doctrine should only be applied to infrastructure

- **Infrastructure test (demand focus)**
 1. Partial non-rivalry (= resource can be shared)
 2. Intermediate good (= not merely for consumption)
 3. Varied downstream use (= enables diverse downstream production of commercial, public, and/or social goods)
- **Essentiality test (supply focus)**
 4. Monopoly power (US: §2, EU: Art. 82)
 5. No reasonable duplication
 6. Refusal to share on non-discriminatory terms
 7. Downstream competition with the resource owner

Applying the infrastructure test to *Aspen, Trinko, and MSFT*

	Infrastructure test (additional demand-side filter, more restrictive)	Essentiality test (more relaxed, applied to infrastructure only)	Comment
Aspen Skiing	No. Access to a ski slope doesn't enable broad, unspecific downstream productivity	Yes	Different outcome. No "forced sharing" under an infrastructure test
Trinko	Yes. Phone network is a prime example of infrastructure; supported by partial regulation	Yes. Degraded service is a refusal to share.	Different outcome. Non-discriminatory access should have been required by the antitrust laws.
MSFT (EU)	Yes. IP is non-rivalrous. Broad downstream productivity gains are highly likely.	Yes. No reason to confine competition to "all or nothing" server installations.	Same outcome. IP standards are often infrastructure, reflected in common RAND commitments.

How is an infrastructure-aware essential facilities doctrine different?

- No open access modification for non-infrastructure assets (more stringent)
- Very limited open access modifications for purely commercial infrastructure (more stringent)
 - Where downstream producers internalize most benefits, there is sufficient demand in upstream markets (e.g., a commercial port)
 - Lower risk of under-supply of infrastructure
 - Strict application of the MCI/MSFT standards
- Broader open access modifications for denying access to mixed infrastructure (somewhat less stringent)
 - Platforms, networks, standards, ideas, etc. that enable broad downstream positive externalities

Attribution for images

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- 105 freeway @ Harbor, by Payton Chung (<http://www.flickr.com/photos/paytonc/84456523/>)

Recommended reading

- Frischmann & Weber Waller, Revitalizing Essential Facilities, 74 Antitrust L.J, 1 (2008)
- Frischmann, An Economic Theory of Infrastructure and Commons Management, 89 Minn. L. Rev. 917 (2005)
- Lee, The Evolution of Intellectual Infrastructure, 83 Wash. L. Rev. 39 (2008)

Thank you!