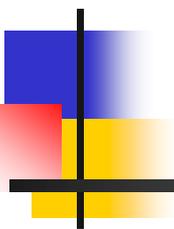


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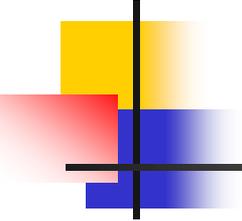
Dominance and Tying for Android



Prof. Nicholas Economides

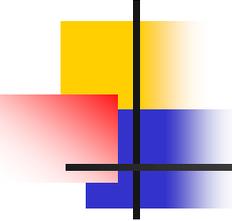
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<http://www.stern.nyu.edu/networks/>
and NET Institute <http://www.NETinst.org/>
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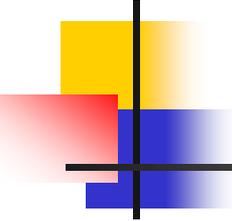
Facts (1): Android OS & Google Mobile Services (GMS)

- “Android” is an off-the-shelf OS that an OEM can freely install on a cell phone or other computing device
- Google Mobile Services (GMS) is a collection (bundle) of applications, including “Google Play,” Google Search, and Google Chrome
- Each service in GMS is complementary to the Android OS
- There are a number of competing third party apps for each app in GMS
- Google Play, part of GMS, is an app allowing search, purchase, download and update other apps for the Android OS from the Google apps store



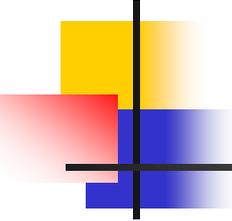
Facts (2): Tying and requirement contracts on GMS

- OEM can choose whether to install GMS
- If the OEM installs GMS, G's contract obligates OEM to
 - Pre-install all the apps in the GMS bundle
 - therefore, Google Play is contractually tied to other apps in GMS including Google Search, and Chrome
 - Pre-install Google Search as the default for Internet search; pre-install Chrome
 - Not pre-install apps that compete with GMS apps (such as third-party "store" and third party "search") on **any other** of its devices running other versions of Android (anti-fragmentation clause)
 - so an OEM cannot produce some devices with GMS on the "standardized Google version of Android" and some without it on another version of Android



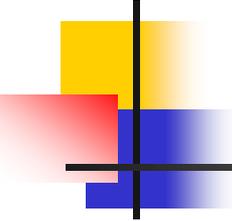
EU complaint, 4/2016: "Abuse of dominance." Similar earlier complaint in Russia.

- In EU
 - Google Play dominant in Android OS 90%+
 - Google Search dominant in Android OS 90%+
 - GMS dominant in Android OS 90%+
- Google Search pre-installed, default, or exclusive search in Android devices
- G paid some OEMs to exclusively pre-install Google Search under the condition that no third party search will be pre-installed



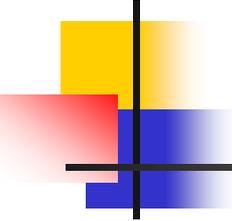
Effects of Google's actions according to complaints

- "G's strategy appears to protect and strengthen Google's dominant position in general internet search, and adversely affect competition in the market for mobile browsers"
- "Anti-Fragmentation Agreement" (not pre-install apps that compete with GMS apps) is not "objectively justified"



Harm because of G's actions according to complaints

- Consumers are harmed because they have less choice
- Less third party entry into apps, so innovation is harmed
- Competition is harmed because of fewer third party apps
- In EU terms, "G abused its dominance"
- In US antitrust terms, "the bundling GMS strategy preserved and enhanced the dominance of Google Search"



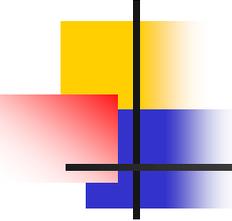
Seems similar to *Microsoft*

- Dominant company (G) forces acceptance of G Search through tying (with G Play)
 - Like Microsoft tying Media Player with OS
- Dominant company (G) enhances and preserves the monopoly in search through tying
 - Like Microsoft tying IE with OS

Google's Defense

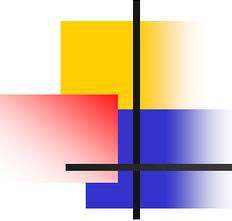
<http://googlepolicyeurope.blogspot.com/2016/04/androids-model-of-open-innovation.html>

- Factual (empirically testable)
 - Consumers can easily download a browser, so default does not have a lasting effect
- This is the only way to make money in this ecosystem
 - Testable, unlikely, and a bad legal defense
- OEM may not install GMS
 - Irrelevant since the issues arise because of the conditions under which GMS is installed



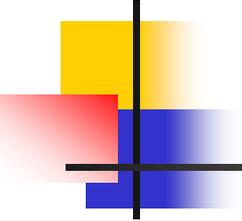
Economics of theories of harm

- Theory 1: Consumers are harmed because tying left them with less choice. True.
- Theory 2: Innovation was harmed since fewer third party apps were developed. True. May be balanced with G's argument of higher effort or quality in the present regime. The latter is almost impossible to prove.
- Theory 3: Tying of G Search with (the desirable to the OEM) G Play is used to enhance and preserve the monopoly of G Search. Very plausible.



Conclusion

- On Android, the cases against Google are pretty solid
- Could easily make the same case in the US and elsewhere



Economides research papers on bundling and tying

- http://www.stern.nyu.edu/networks/Economides_Tying_Bundling_and_Loyalty_Requirement_Rebates.pdf
- http://www.stern.nyu.edu/networks/Economides_Loyalty_Discounts.pdf
- http://www.stern.nyu.edu/networks/Economides_Lianos_Bundling.pdf
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