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Service Commons

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Do You Read Through Terms of Services?

Facebook API ToS

- Maybe, but with some pain at least
- Sometimes just ignored while you must

This agreement was written in English (US). To the extent any translated version of this agreement conflicts with the English version, the English version controls. Please note that Facebook has certain restrictions on the general use of our services in the United States.

Statement of Rights and Responsibilities (Statement) derives from the [Facebook Principles](#), and by using or accessing Facebook, you agree to this Statement.

Privacy is very important to us. We designed our [Privacy Policy](#) to make important disclosures about how we use your content and information. We encourage you to read the Privacy Policy, and to use it to manage your privacy settings on our services.

Sharing Your Content and Information

You own all of the content and information you post on Facebook, and you can control how it is shared through [privacy and permissions settings](#). In addition, you can control how it is shared by others who use your content. You should know that the privacy permissions you set for your content are not absolute. For example, you may not be able to control how your content is shared if you share it with someone who has a higher privacy setting than you. You may also not be able to control how your content is shared if you share it with someone who has a higher privacy setting than you.

Advertising

We use your content and information to help us deliver targeted advertising to you and other users. We use your content and information to help us deliver targeted advertising to you and other users. We use your content and information to help us deliver targeted advertising to you and other users. We use your content and information to help us deliver targeted advertising to you and other users.

Registration and Account Security

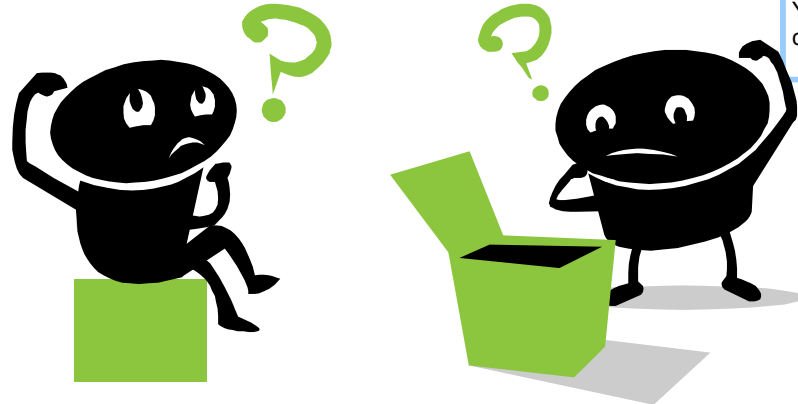
Facebook asks you to provide certain personal information, and we need your help to keep that help. Here are some commitments you make in relation to registering and maintaining the security of your account.

Statement of Rights and Responsibilities

This Statement of Rights and Responsibilities (Statement) derives from the [Facebook Principles](#), a using or accessing Facebook, you agree to this Statement.

Privacy

Your privacy is very important to us. We designed our [Privacy Policy](#) to make important disclosures about how we use your content and information. We encourage you to read the Privacy Policy, and to use it to manage your privacy settings on our services.



About This Talk

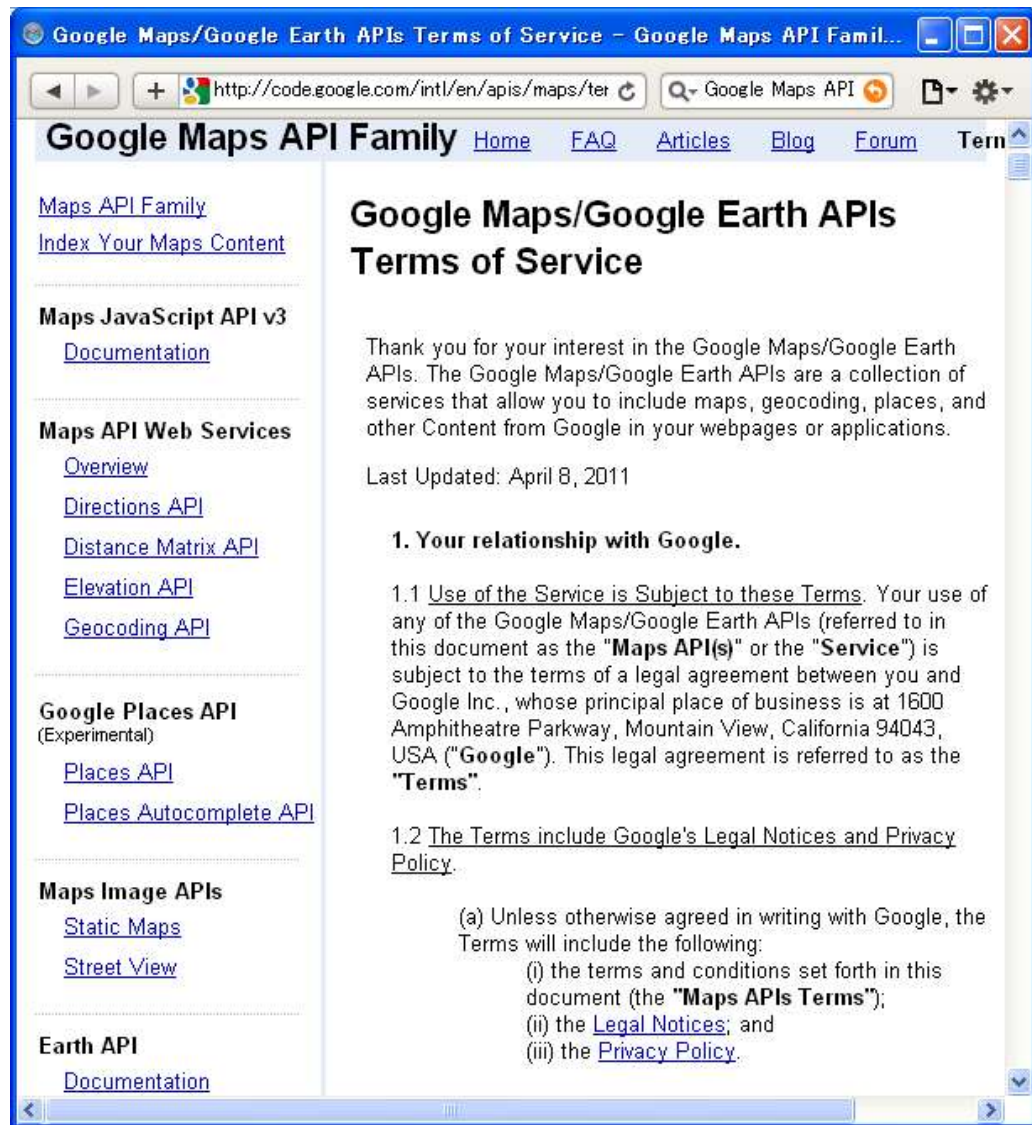
- Semantic terms of services (ToS)
- Service Commons = vocabulary for common ToS
 - Following the idea of Creative Commons
- License compatibility
- Practices



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Terms of Service

Ubiquitous Terms of Services (ToS)



ToS
is one of major
**Non-Functional
Requirements!**

We cannot ignore
when selecting services
(by hand or automatically)

Related Work: Web Service Contracts & Agreements – Focuses on Service-Level Agreements



- WSLA [Keller03]
- WS-Agreement [Andrieux07]
- SLAng [Skene04]
- WSOL [Tosic03]
- Web Services Policy Language [Anderson04]
- WS-Policy [Vedamuthu07]

Focusing on service-level agreements (aka SLA)

We Follow the Sprit of Creative Commons

- Creative Commons (CC) License
 - “Some Rights Reserved”
 - Explicitly allowing/prohibiting use of copies

CC 3.0 Licenses

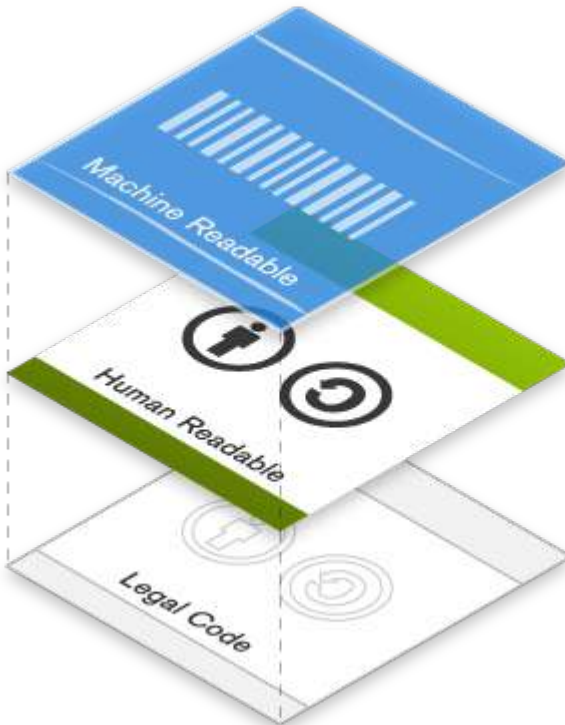
| | | 作品の商用利用を許可するか | |
|-------------------------|--------------------------|--|---|
| | | 許可する | 許可しない |
| 作品の 改変を 許可 するか | 許可する |  表示(CC BY) |  表示-非営利(CC BY-NC) |
| | 許可するが ライセンスの条件 は継承 |  表示-継承(CC BY-SA) |  表示-非営利-継承(CC BY-NC-SA) |
| | 許可しない |  表示-改変禁止(CC BY-ND) |  表示-非営利-改変禁止 (CC BY-NC-ND) |



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Service Commons

The Service Commons (SC) Three-Layer Design, Ported from CC



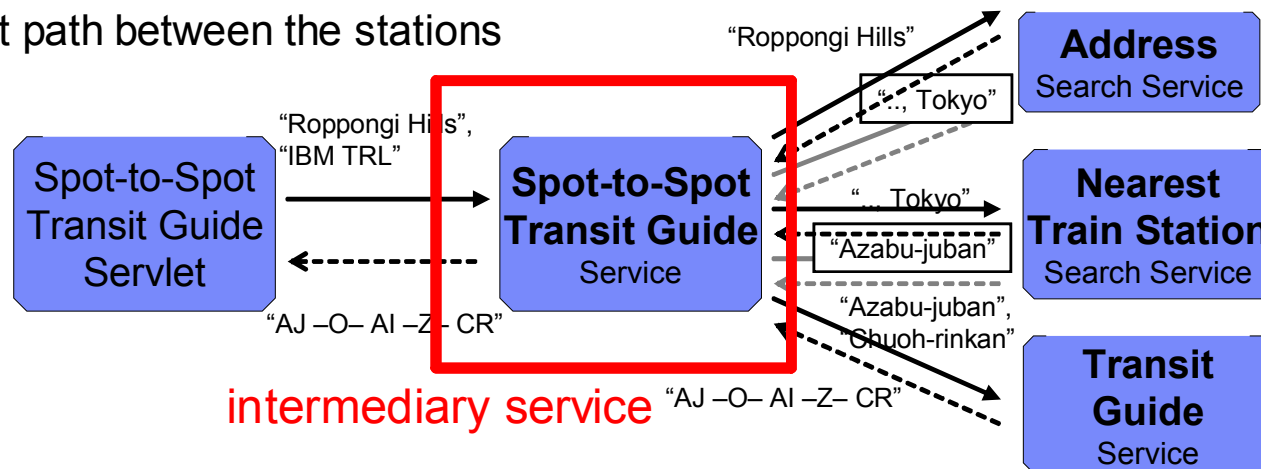
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Three layers:

- **Machine Readable**
 - For Web service client programs
- **Human Readable**
 - For service owners & engineers
- **Legal Code**
 - For attorneys

Intermediaries Make Difference in Service Licensing from Digital Content Licensing

- Mashing-up “Spot-to-Spot Transit Guide” Service, by composing:
 - Address Search Service
 - Input: name (of a geographical spot)
 - Output: address (of the spot)
 - Nearest Train Station Search Service
 - Input: address (of arbitrary place)
 - Output: station name
 - Transit Guide Service
 - Input: two station names
 - Output: transit path between the stations



4 Primitive Components, Ported from CC



BY

- **BY – Attribution**

- Requiring a credit for the original service



NC

- **NC – Noncommercial**

- No commercial use



ND

- **ND – No derivative service**

- No derivative service *for machines*




SA

- **SA – Serve alike**

- Requiring derivative services to license same as the original service

SC Legal Code

1. Definitions
- 2. License Grant and Restrictions**
3. Warranties and Disclaimer
4. Limitation on Liability
5. Termination
6. Representation
7. Indemnity
8. Evolution
9. General Legal Issues and Jurisdiction



Variations for
license types

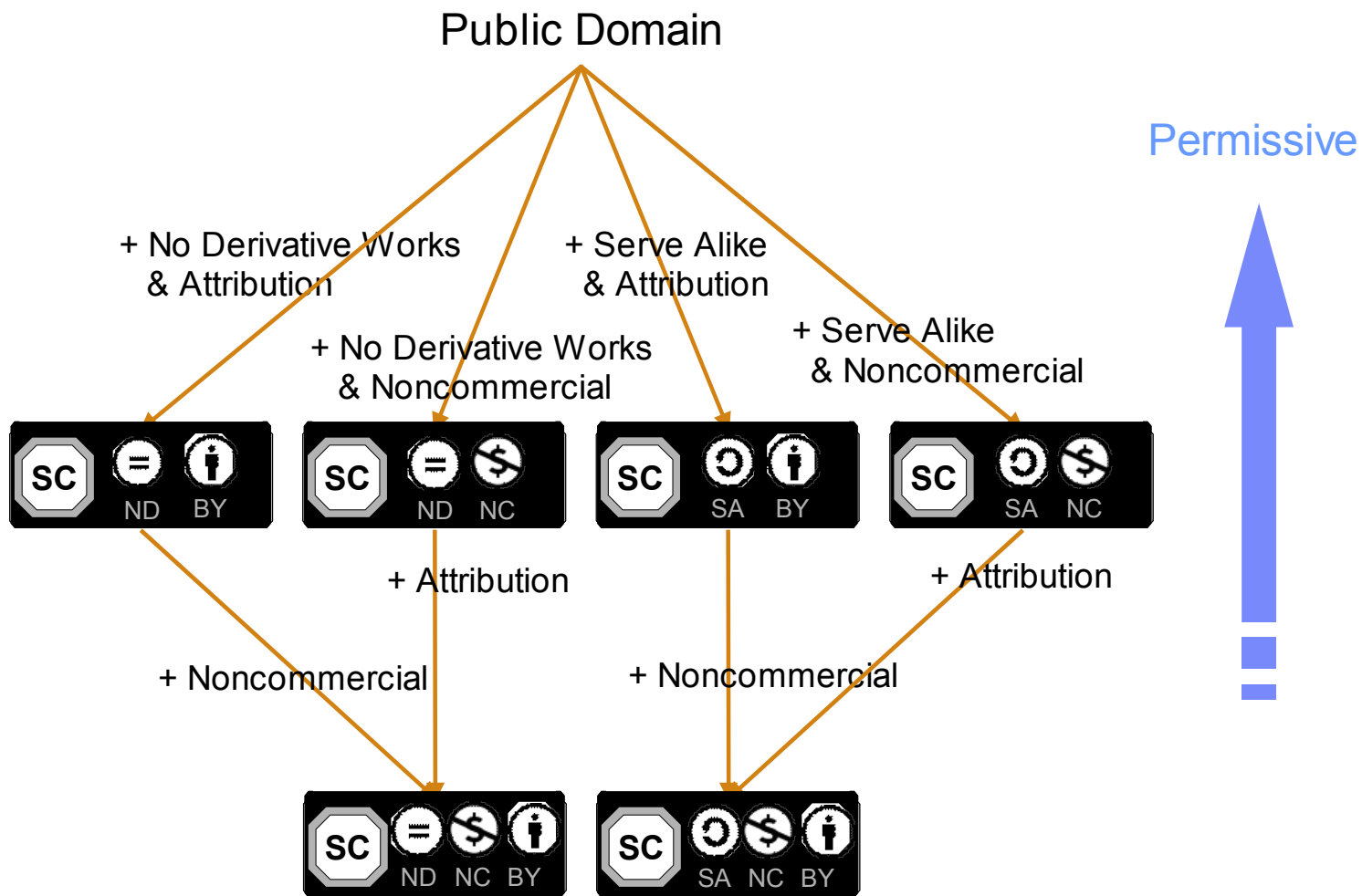
Some Combinations are Meaningless

The points of interest:

- SA (serve alike) versus ND (non derivative service)
- License laundering for BY (attribution) and NC (noncommercial)

- Motivation principles (assumed) for services
 - Voluntary and donation
 - Advertisement
 - Academic purposes?

6 + 1 Service Commons (SC) Licenses





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License Compatibility

SA (Serve Alike) Too Restrictive

- Only **Exactly-Same License Types** Allowed for Derived Services

License Compatibility

| Compatibility Analysis | | Service Commons License Type for Derived Service | | | | | |
|---|----------|--|-------|----------|-------|-------|----------|
| | | BY-SA | NC-SA | BY-NC-SA | BY-ND | NC-ND | BY-NC-ND |
| Service Commons License Type for Original Service | BY-SA | X | | | | | |
| | NC-SA | | X | | | | |
| | BY-NC-SA | | | X | | | |
| | BY-ND | | | | | | |
| | NC-ND | | | | | | |
| | BY-NC-ND | | | | | | |

Permissive Licenses with Multiple Licensing

- Dual (multiple) licensing allows more permissive use
 - **BY-SA+** = BY(-NC)?-[SA|ND]
= BY-SA | BY-ND | BY-NC-SA | BY-NC-ND
 - **NC-SA+** = (BY-)?NC-[SA|ND]
= NC-SA | NC-ND | BY-NC-SA | BY-NC-ND
 - **BY-NC-SA+** = BY-NC-[SA|ND]
= BY-NC-SA | BY-NC-ND

License Compatibility

| More Permissive License Type | Service Commons License Type for Derived Service | | | | | | | | |
|------------------------------|---|--------|-----------|-------|-------|----------|-------|-------|----------|
| | BY-SA+ | NC-SA+ | BY-NC-SA+ | BY-SA | NC-SA | BY-NC-SA | BY-ND | NC-ND | BY-NC-ND |
| BY-SA+ | X | | X | X | | X | X | | X |
| NC-SA+ | | X | X | | X | X | | X | X |
| BY-NC-SA+ | | | X | | | X | | | X |

The Whole Compatibility Picture

| Compatibility Analysis | | Service Commons License Type for Derived Service | | | | | | | | |
|--|----------------------------|---|--------|-----------|-------|-------|----------|-------|-------|----------|
| | | BY-SA+ | NC-SA+ | BY-NC-SA+ | BY-SA | NC-SA | BY-NC-SA | BY-ND | NC-ND | BY-NC-ND |
| Service Commons License Type for Original Service | BY-SA+ | X | | X | X | | X | X | | X |
| | NC-SA+ | | X | X | | X | X | | X | X |
| | BY-NC-SA+ | | | X | | | X | | | X |
| | BY-SA | | | | X | | | | | |
| | NC-SA | | | | | X | | | | |
| | BY-NC-SA | | | | | | X | | | |
| | BY-ND NC-ND BY-NC-ND | | | | | | | | | |



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Experiments

Experiments: Simulating Feasibility with Existing Free-of-Charge Services

- Google Maps API Terms of Service
- Twitter API Terms of Service
- YouTube API and Tools Terms of Service
- Flickr API Terms of Use
- Facebook Platform Policies Statement of Rights and Responsibilities



Terms (Mostly) Captured

| | Google Maps/ Google Earth APIs Terms of Service | Twitter Terms of Service | YouTube APIs and Tools Terms of Service | Flickr APIs Terms of Use | Facebook Platform Policies Statement of Rights and Responsibilities |
|---|--|--|--|--|---|
| 1 | Definitions | 1. Your relationship with Google (413 words) 2. Accepting the Terms (198 words) | 0. Introduction (73 words) 1. Basic Terms (332 words) | I-1. Compliance with Terms. (157 words) | 1. Licensed Uses and Restrictions (712 words*) 0. Introduction (34 words) 17. Definitions (270 words) |
| 2 | License Grant and Restrictions | 7. Permitted Uses (72 words) 8. Licenses from Google to You (950 words) 9. License Requirements (845 words) 10. License Restrictions (1857 words) | 7. Restrictions on Content and Use of the Services (434 words) | I-2. Commercial Use (254 words) I-3. Notices to Users (154 words) I-4. Brand Feature Rules (197 words) I-5. Caching (79 words) I-6. Upgrades (52 words) II. Prohibitions (378 words) III-3. Non-exclusive (36 words) | 1. Licensed Uses and Restrictions (712 words*) 2. Commercial Use (255 words) 3. Attribution (101 words) 9. Special Provisions Applicable to Developers/Operators of Applications and Websites (717 words*) 10. About Advertisements and Other Commercial Content Served or Enhanced by Facebook (126 words) 11. Special Provisions Applicable to Applications (192 words*) |
| 3 | Warranties and Disclaimer | 13. EXCLUSION OF WARRANTIES (337 words) | 9. The Services are Available "AS-IS" (198 words) 12. Exclusions (32 words*) | III-9. Disclaimer and Limitation of Liability (91 words*) 7. Disclaimer of Any Warranty (136 words) 9. Exclusions and Limitations (42 words*) | 15. Disputes (420 words*) |
| 4 | Limitation on Liability | 14. LIMITATION OF LIABILITY (280 words) | 11. Limitation of Liability (155 words) 12. Exclusions (32 words*) | III-9. Disclaimer and Limitation of Liability (91 words*, \$500 max) 8. Limitation of Liability (81 words) 9. Exclusions and Limitations (42 words*) | 15. Disputes (420 words*, \$100 max) |
| 5 | Termination | 12. Terminating this Agreement (319 words) | 13. Waiver and Severability (56 words*) | III-7. Termination (163 words) | 0. Introduction (165 words*) 14. Termination (97 words) |
| 6 | Representation | 6. Google's Proprietary Rights (62 words) | 6. Twitter Rights (112 words) | III-2. No Implied Rights (117 words) | 4. Ownership and Relationship of Parties (139 words) |
| 7 | Indemnity | 15. Indemnities (176 words) | 9. The Services are Available "AS-IS" (198 words) 13. Waiver and Severability (56 words*) | III-6. Indemnification (148 words) III-10. Release (192 words) | 10. Release and Waiver (208 words) 11. Hold Harmless and Indemnity (90 words) 15. Disputes (420 words*) |
| 8 | Evolution | 4. Provision of the Service by Google (773 words) | 15. Entire Agreement (185 words) | I-7. Deprecation. (419 words) III-8. Modification (111 words) | 0. Introduction (165 words*) 5. Support (87 words*) 13. Amendments (180 words) |
| 9 | General Legal Issues and Jurisdiction | 19. General Legal Terms (406 words) 18. Language of the Terms (75 words) | 14. Controlling Law and Jurisdiction (173 words) | III-1. Compliance with Laws (82 words) III-11. Miscellaneous (212 words) | 12. General Terms (209 words) 3. Safety (239 words) 18. Other (223 words) 16. Special Provisions Applicable to Users Outside the United States (115 words) |

Terms Not Captured

| | | Google Maps/ Google Earth APIs Terms of Service | Twitter Terms of Service | YouTube APIs and Tools Terms of Service | Flickr APIs Terms of Use | Facebook Platform Policies Statement of Rights and Responsibilities |
|----|--|--|---|--|---|--|
| 10 | Account and Privacy | 3. Privacy and Personal Information (115 words) | 2. Privacy (139 words) | III-4. Publicity (67 words) | | 1. Privacy (56 words) |
| | | 5. Your Google Account (171 words) | 3. Passwords (70 words) | III-5. Confidentiality (156 words) | | 4. Registration and Account Security (242 words) 6. Mobile (109 words*) |
| | | 11. Licenses from You to Google (189 words) | | | | |
| 11 | Quotas and Fees for Usage | 16. Copyright Policies; Content Removal; Termination of Repeat Offenders' Accounts (56 words*) | | I-8. Usage and Quotas. (29 words) | 5. Support (87 words*) 6. Fees and Payments (63 words) | 6. Mobile (109 words*) 7. Payments and Deals (65 words) 9. Special Provisions Applicable to Developers/Operators of Applications and Websites (717 words*) |
| 12 | User/Service Provided Content | 16. Copyright Policies; Content Removal; Termination of Repeat Offenders' Accounts (56 words*) | 5. Your Rights (449 words) | | | 2. Sharing Your Content and Information (293 words) 5. Protecting Other People's Rights (236 words) 12. Special Provisions Applicable to Pages (21 words) |
| | | 17. Other Content (137 words) | 4. Content on the Services (190 words) 8. Copyright Policy (283 words) 10. Links (97 words) | | | 8. Special Provisions Applicable to Share Links (89 words) |

Summary of Terms Not Captured

10. Account and Privacy

11. Quotas and Fees for Usage

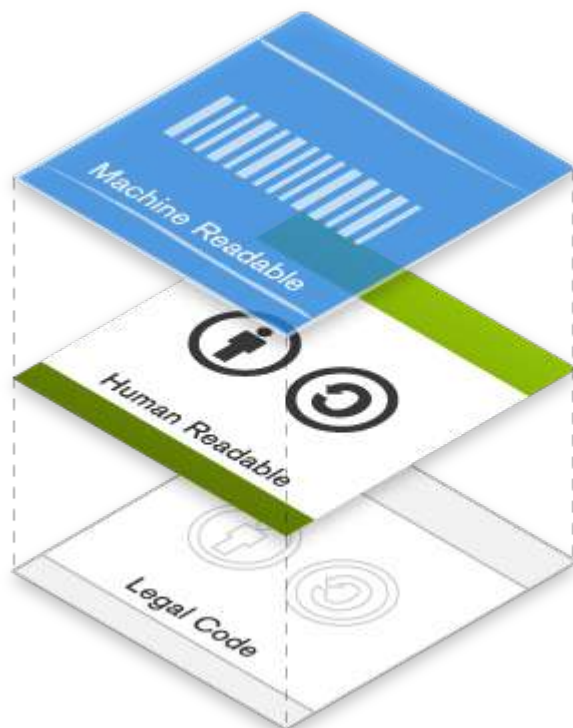
12. User/Service Provided Content



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Summary & Future Work

Summary: Service Commons Proposed



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Three layers:

- **Machine Readable**
 - For Web service client programs
- **Human Readable**
 - For service owners & engineers
- **Legal Code**
 - For attorneys

Related Work: License Ontology

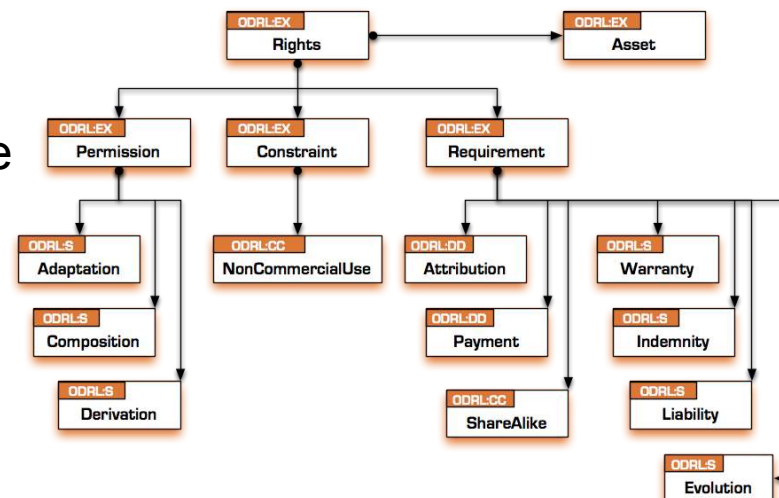
– Ideal, but a Long Way Ahead

- ODRL-S (ODRL Services Profile)
 - Unambiguously represents service licensing clauses (based on formalization of licensing clauses),
 - Is simple yet powerful and fully extensible language,
 - Can specify licenses at service level and service operation level,
 - Can be used with any of existing service description standards and languages, and
 - Is developed as a completely compatible profile with ODRL for describing a service license.

– ODRL = Open Digital Rights Language

- <http://www.w3.org/community/odrl/>

– First working draft in 2008





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Thank you! Questions?

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