

SPECIFICATION 54:

Provide a list and produce a copy of all interconnection agreements, formal or informal, the Company has entered into with CDNs, edge providers, Internet access service providers and Internet backbone services providers, and all documents discussing factors the Company considers or considered in negotiating the terms of any interconnection agreement.

Response to Specification 54:

All non-privileged documents requested in the Commission's Request for Information will be submitted shortly following adjustments to reflect ongoing clarification discussions with Commission staff. A list of the interconnection agreements or arrangements with other networks and services (both oral and written) as of June 30, 2014 are as follows:

{{

{{

}}

{{

}}

In addition, the following is a list of peering agreements since May 31, 2011 that are no longer in place:

{{

}}

SPECIFICATION 55:

Describe any performance, service delivery guarantees or service level agreements that the Company offers to edge providers and CDNs, including but not limited to guarantees relating to latency, data rate (bandwidth/speed), steady state, peak, burst, dynamic variation or other qualifiers, packet loss, jitter, and entry points into the network.

Response to Specification 55:

{{

}}

SPECIFICATION 56:

Produce all documents relating to:

- (a) Netflix, Inc.'s Internet traffic;**
- (b) the Company's interconnection agreement with Netflix, Inc., and the negotiations for that agreement, including but not limited to, discussions regarding traffic volumes, traffic quality, Netflix's Open Connect CDN, and network capacity; and**
- (c) changes, if any, in policies and procedures for technical methods related to Netflix, Inc.'s traffic on the Company's Internet access service or Internet backbone services, including but not limited to, methods related to packet classification, admission control and resource reservation, rate control and traffic shaping, congestion management, packet dropping and packet scheduling.**

Response to Specification 56:

All non-privileged documents requested in the Commission's Request for Information will be submitted shortly following adjustments to reflect ongoing clarification discussions with Commission staff.

SPECIFICATION 57:

Identify each instance, since January 1, 2009, where the Company entered negotiations for an interconnection agreement where the negotiations did not result in a formal or informal contract. Produce all documents relating to such negotiations between the Company and any other person, including, but not limited to, documents related to the Company's or any other party's interconnection policies or practices or change in such policies or practices, such as imposing charges or other conditions and the effects of such changes.

Response to Specification 57:

All non-privileged documents requested in the Commission's Request for Information will be submitted shortly following adjustments to reflect ongoing clarification discussions with Commission staff. Since January 1, 2009, TWC has entered negotiations for an interconnection agreement where the negotiations did not result in a formal or informal contract with the following:

{{

}}

SPECIFICATION 58:

For each settlement-free peering arrangement entered into by the Company from January 1, 2009, to date, (i) describe each instance when the Company initiated a discussion that resulted in replacement of a settlement-free peering arrangement with paid peering or transit service agreement, including a description of the settlement-free peer, the date the change was made and of the reasons the change was made, and (ii) identify each person who initiated a discussion that resulted in the replacement of a settlement-free peering arrangement with the Company with a paid peering or transit service agreement, including a description of the settlement-free peer, the date the change was made and of the reasons the change was made.

Response to Specification 58:

The Company undertakes periodic reviews of its existing interconnection relationships to ensure, among other things, that all of the criteria set forth under its published IPv4 and IPv6 settlement-free peering policy (the "Policy") continue to be met. When an SFI arrangement with a network fails to meet the requirements of the Policy or otherwise fails to make business sense, the Company undertakes a business decision to determine whether a settlement-free peering arrangement should be changed. *See* Exhibit 58 for a copy of the Policy, which is publicly available on TWC's website. In each of the instances below in which TWC initiated a discussion that resulted in the replacement of a settlement-free peering arrangement with a paid arrangement, the Policy formed the basis for TWC's initiation of discussions to establish alternative terms.

For the period January 1, 2009 to the present, TWC has initiated discussions that resulted in the replacement a settlement-free peering arrangement with a paid arrangement for the following entities:

{{

³ A "sender-pays" agreement is a bilateral peering agreement pursuant to which no settlement will be paid by either party if the traffic ratio is within a certain defined limit. If the traffic ratio from the sender exceeds that limit, then the out-of-balance sender pays a settlement to the other party.

}}

For the period January 1, 2009 to the present, the following entities have initiated discussions with TWC that resulted in the replacement a settlement-free peering arrangement with a paid arrangement:

{{

}}

SPECIFICATION 59:

Describe, and produce all documents relating to:

- a. the Company's policies with respect to upgrading, declining to upgrade, or downgrading interconnections between the Company and any person;**
- b. the Company's policies, processes and procedures for addressing congestion at interconnection links, including but not limited to: (1) how far in advance the Company plans for upgrades of interconnection links; (2) the criteria used to determine whether to upgrade capacity when requested, whether requests from settlement-free peers, paid peers, transit service providers, and transit service customers are evaluated using different criteria, and how requests for and installation of upgrades of interconnection links are prioritized; (3) whether the Company automatically seeks to add additional capacity when interconnection links reach a certain level of traffic (and if so, where that level is set); and (4) the costs, processes, and length of time involved in provisioning additional capacity, including a description of, and how the Company determines, which party should bear which costs;**
- c. any metrics that the Company uses in order to determine whether to upgrade or downgrade an interconnection (e.g., maximum acceptable network utilization or congestion, maximum acceptable packet loss, port availability, bandwidth capacity at particular points, latency, etc.), including what metrics are gathered and what measurement intervals are used;**
- d. requests, from January 1, 2010 to the present, by settlement-free peers to upgrade capacity that were not implemented within 90 days; and**
- e. any criteria by which the Company chooses a particular type of upgrade or downgrade (e.g., addition or subtraction of an interconnection site, or addition or subtraction of capacity at an existing site).**

Response to Specification 59:

All non-privileged documents requested in the Commission's Request for Information will be submitted shortly following adjustments to reflect ongoing clarification discussions with Commission staff.

[[

SPECIFICATION 60:

List, for any upgrades or downgrades to interconnection links from January 1, 2011, to the present, for the 25 largest networks that interconnect with the Company measured by maximum capacity usage measured using the industry standard 95th percentile method: (i) the dates of the upgrades or downgrades; (ii) the amount of capacity added or removed; (iii) the type of upgrade or downgrade; (iv) whether the upgrade was initiated by a request from the network operator, or undertaken by the Company on its own initiative; and (v) the reason for the upgrade or downgrade.

Response to Specification 60:

For upgrades or downgrades to interconnection links, TWC does not maintain records of the dates, amount of capacity added or removed, the type of upgrade/downgrade, reason for the upgrade or how the upgrade decision was initiated. However, the information that will be provided the Interconnection Spreadsheet responsive to Specification 71, which includes monthly capacity and utilization figures, illustrates the changes in capacity and utilization over time.

SPECIFICATION 61:

The Applicants claim that “any action that the combined firm might undertake to harm edge providers would degrade its broadband service and reduce the profits it could earn. ... Providing high-quality broadband service provides Comcast with the significant percentage of its revenue and an even higher percentage of Comcast’s and TWC’s operating cash flow...” Public Interest Statement at page 157, and Dr. Israel states that the “alternative of attempting to harm OTT providers by erecting “tollbooths” or otherwise foreclosing access to Comcast’s broadband subscribers ... would harm Comcast’s broadband business.” April 8, 2014 Israel Declaration at par. 37.

- (a) Describe in detail how harming edge providers would degrade Comcast’s Internet access service and would reduce the profits Comcast could earn, and produce the data and calculations performed to support this statement, including, but not limited to, stating the “profit,” “revenue” and “operating cash flow,” and changes thereto, used in reaching the conclusion recited in this Request, and the quantification of the amount that the degradation of the Internet access service would reduce Comcast’s profit;
- (b) Describe in detail the harm to Comcast’s Internet access service business that would result from “erecting tollbooths” or “foreclosing access to Comcast’s Internet access service subscribers,” including but not limited to all quantifications of the harms;
- (c) Describe in detail the support for the statement that providing high quality Internet access service generates for the Company a “significant percentage of Comcast’s revenue and an even higher percentage of Comcast’s and TWC’s operating cash flow;”
- (d) State whether the Company weighed any of the harms described in the statements recited in this Request against any benefits received from the harm to competition a lower quality or slower Internet access service could cause, and if so, describe the weight given to each element and produce all documents relating to the balancing undertaken by the Company; and
- (e) Produce all data and documents relied upon in making the statements quoted in this Request, and the calculations that support these statements.

Response to Specification 61:

TWC refers the Commission to Comcast’s response to this inquiry, as Comcast will be responsible following the consummation of the transaction for determining policies regarding edge providers and the economics of its broadband service.

SPECIFICATION 62:

Identify and describe each type of customer class that the Company serves, or desires to serve, outside its service areas, and describe how it markets business services or monitors the sales of such services to each customer class identified. In your description of each identified customer class (including small, medium, enterprise and cellular backhaul customers as defined on page 85 of the Public Interest Statement), include specific characteristics that distinguish each class (e.g., revenue size, geographic scope) and describe how the Company markets and monitors the sale of business services. Produce all documents relating to competition to provide services to each customer class defined on page 85 of the Public Interest Statement.

Response to Specification 62:

All non-privileged documents requested in the Commission's Request for Information will be submitted shortly following adjustments to reflect ongoing clarification discussions with Commission staff. In addition, TWC response to this specification as follows:

In general, TWC serves the following customer classes for its service offerings that may have business locations outside of its service areas:

- *Medium-sized business:* [[

]]

- *Enterprise business:* [[

SPECIFICATION 63:

Produce all documents relating to bids submitted in response to requests for proposals to supply business services to customer locations outside the Company's service areas, including, but not limited to, the bids, and discussions with other persons whose service area includes customer locations outside the Company's service areas.

Response to Specification 63:

All non-privileged documents requested in the Commission's Request for Information will be submitted shortly following adjustments to reflect ongoing clarification discussions with Commission staff.

SPECIFICATION 64:

Describe in further detail, and produce all documents relating to, the business services initiative mentioned in paragraph 152 of the Israel Declaration submitted in support of the proposed TWC transaction, in which the Applicants will “partner to serve national accounts that span the footprints of the two firms by aggregating services,” and state when the planning for this partnership began, the identity of any persons that Comcast’s intends to offer to provide services to after consummation of the proposed TWC transaction and proposed divestiture transactions, the services Comcast plans to provide and what next steps, if any, will be taken.

Response to Specification 64:

The business services initiative referenced at paragraph 152 of the Israel Declaration is a plan for reciprocal arrangements between Comcast and TWC, intended to position the companies to better serve larger, multi-location business. {{

}}

After consummation of the proposed TWC transaction and the divestiture transactions, TWC expects that Comcast will rapidly expand its provision of business services to larger, multi-location businesses. The combined company will be able to compete more effectively for such customers by combining both Comcast’s and TWC’s respective product offerings as well as their combined service areas, and can offer customers the benefits of a single provider solutions for many services.

SPECIFICATION 65:

To the extent the Applicants contend that the proposed TWC transaction and the proposed divestiture transactions will result in (i) savings in any costs or expenditures, (ii) geographic efficiencies, (iii) an enhanced ability to introduce new products, provide more products and services to customers and to improve service quality and management of communications security risks, and (iv) any other synergies:

(a) describe in detail all of the claimed efficiencies, savings, new and improved products and synergies that are projected by the Applicants to result from the proposed TWC transaction and the proposed divestiture transactions, and submit a timeline for when these efficiencies, savings, new or improved products and synergies will be generated and recognized by the Company;

(b) produce all plans, analyses, and reports, models, assumptions, and spreadsheets, relating to the estimates of savings in costs, new or improved products the Company will introduce, and all synergies referred to in the Applicants' filings in the record;

(c) describe in detail, and produce all documents relating to, how the proposed TWC transaction and the proposed divestiture transactions "should result in cost savings and other synergies worth approximately \$1.5 billion in increased earnings before interest, taxes, depreciation and amortization within three years, and recurring every year thereafter" and "approximately \$400 million in capital expense efficiencies." (Public Interest Statement at page 27);

(d) provide, for each operational savings or cost synergy identified by the Applicants in determining their total savings and annual savings referred to in the Public Interest Statement and supporting declarations: (1) a quantification of the operational savings or cost synergy and an explanation of how the quantification was calculated; and (2) the steps that the Company anticipates taking to achieve that operational savings or cost synergy, and the estimated time and costs required to achieve it;

(e) state, for each cost savings, whether it is a fixed cost saving or a variable cost saving and explain the reasoning. State separately the one-time fixed cost savings, recurring fixed cost savings, and variable cost savings (in dollars per subscriber and dollars per year);

(f) produce all documents analyzing, estimating, justifying, providing the basis for, or otherwise discussing: (1) the operating and capital expense efficiencies and additional revenue synergies referred to in Paragraphs 6-11 in the Angelakis Declaration; (2) the increased economies of scale and scope, enhanced ability to increase investment and innovation, and the expansion and acceleration of infrastructure development as described in Paragraphs 12-39 of the Angelakis Declaration; (3) the benefits to businesses as described in Paragraphs 31-39 of the Angelakis Declaration; (4) the benefits to advertisers as described in Paragraphs 40-42 of the Angelakis Declaration; and (5) the improvements in broadband quality as described in Paragraphs 171-180 of the Israel Declaration; and

(g) for each new and improved product or service that the Company claims it will be able to offer as a result of the proposed TWC transaction and the proposed divestiture transaction, state specifically the amount the Company will need to invest and spend to

provide the new or improved product or service, identifying each element of the cost, including but not limited to, research, development, licensing fees, equipment and manufacturing costs.

Response to Specification 65:

TWC refers the Commission to Comcast's response to this inquiry, as Comcast will be responsible following the consummation of the transaction for achieving savings in costs and expenditures, geographic efficiencies, and enhancing the combined company's ability to introduce new and improved products and services (including the timeline and details of such efforts).

SPECIFICATION 66:

Produce all documents analyzing, estimating, justifying or providing the basis for, or otherwise discussing any synergies claimed in the Public Interest Statement.

Response to Specification 66:

All non-privileged documents requested in the Commission's Request for Information will be submitted shortly following adjustments to reflect ongoing clarification discussions with Commission staff.

SPECIFICATION 67:

Produce all documents

(i) relating to any communication between employees of the Company and any other person with respect to any potential cost savings, efficiencies or synergies,

(ii) provided by any other person to the Company relating to any potential cost savings, efficiencies or synergies, and

(iii) provided by the Company to any other person relating to any potential cost savings, efficiencies or synergies.

Response to Specification 67:

All non-privileged documents requested in the Commission's Request for Information will be submitted shortly following adjustments to reflect ongoing clarification discussions with Commission staff.

SPECIFICATION 68:

Produce all documents relied upon or referred to in the Angelakis Declaration. In addition, produce all documents provided to, reviewed by, relied upon, or referred to by Dr. Gregory L. Rosston, Dr. Michael D. Topper, Dr. Mark A. Israel, and Richard R. Dykhouse in their respective declarations.

Response to Specification 68:

TWC refers the Commission to Comcast's response to this inquiry, as Comcast was responsible for the production of all documents relied upon, or referred to by, the experts referenced by the Commission.

SPECIFICATION 69:

Produce all vertical foreclosure analysis, or other vertical competitive effects analysis, econometric modeling, or similar analyses, including those regarding market concentration or pricing, that have been undertaken by the Company or any consultant or expert hired by the Company to analyze the effect of the proposed TWC transaction and the proposed divestiture transactions, including all documents and data used in these analyses.

Response to Specification 69:

All non-privileged documents requested in the Commission's Request for Information will be submitted shortly following adjustments to reflect ongoing clarification discussions with Commission staff.

SPECIFICATION 70:

Produce a copy of

- (i) The Nielsen Report,**
- (ii) ComScore report,**
- (iii) SNL Kagan report,**
- (iv) Centris report, and**
- (v) any other third party report on MVPD service, video programming or OVD video usage regularly used by the Company and all research using any of these reports.**

Response to Specification 70:

All non-privileged documents requested in the Commission's Request for Information will be submitted shortly following adjustments to reflect ongoing clarification discussions with Commission staff.

SPECIFICATION 71:

Provide the Company's data as specified in Attachment A, which seeks data relating: to active and potential business service addresses; internet traffic exchange and interconnection; subscriber and plan data; daily data on the capacity and use of IP points of presence; and, for Comcast, Charter and SpinCo after the consummation of the proposed divestiture transactions, monthly data for cable service on subscribers and locations served.

Response to Specification 71:

TWC is working on compiling a response to this specification and will provide a supplementary response as soon as possible.

SPECIFICATION 72:

Submit all documents analyzing the

(i) the proposed acquisition of DirecTV, Inc. by AT&T, Inc., and

(ii) the distribution agreement between The Walt Disney Company and Dish Network Corporation.

Response to Specification 72:

All non-privileged documents requested in the Commission's Request for Information will be submitted shortly following adjustments to reflect ongoing clarification discussions with Commission staff.

SPECIFICATION 73:

Produce one copy – in electronic form if available, otherwise in hard copy – of each document, database, or data set used or maintained by the Company at any time after January 1, 2009, without regard to custodian, that constitutes, records, or discusses for each relevant service:

- (i) subscriber acquisition cost;**
- (ii) subscriber churn, service level change, cancellation or additions;**
- (iii) audience or viewership measurement;**
- (iv) advertising sales personnel call reports;**
- (v) prices, discounts, quotes, estimates, or bids submitted to any customer or potential customer;**
- (vi) sales;**
- (vii) Internet traffic;**
- (viii) billing;**
- (ix) customer relationship databases; and**
- (x) network performance. For each database or data set produced in response to this Request, submit any accompanying data dictionary, and any software product or platform required to access the database or data set.**

Response to Specification 73:

All non-privileged documents requested in the Commission's Request for Information will be submitted shortly following adjustments to reflect ongoing clarification discussions with Commission staff.

SPECIFICATION 74:

For each relevant service, identify each electronic or other database or data set used or maintained by the Company at any time after January 1, 2009, without regard to custodian, that contains information concerning the Company's (i) sales; (ii) prices; (iii) margins; (iv) costs, including but not limited to, programming costs, distribution costs, standard costs, expected costs, and opportunity costs; (v) patents or other intellectual property; (vi) research or development projects; (vii) licensing of video programming; (viii) customers; and (ix) network performance, to the extent such customer information is not provided in response to Request 73. For each such database, identify (a) the database type, i.e., flat, relational, or enterprise; (b) the size in both number of records and bytes of information; (c) the fields, query forms, and reports available or maintained; and (d) any software product or platform required to access the database.

Response to Specification 74:

All non-privileged documents requested in the Commission's Request for Information will be submitted shortly following adjustments to reflect ongoing clarification discussions with Commission staff.