### **Analysis of Leases Network**

This document summarizes a detailed analysis of one randomly selected network of the US GAAP XBRL Taxonomy. The network used for the analysis is "831000 - Leases". The analysis was undertaken to determine if there was a better way to organize the pieces which make up the US GAAP XBRL Taxonomy so that it more aligns how users make use of the taxonomy.

The following is a rendering of the Leases network as the US GAAP XBRL Taxonomy (2014) was released by the FASB:

http://www.xbrlsite.com/2014/US-GAAP-2014-AsReleased/us-gaap-dis-lea-pre-2014-01-31 ModelStructure.html

(Computer readable version): <a href="http://www.xbrlsite.com/2014/US-GAAP-2014-AsReleased/us-gaap-dis-lea-pre-2014-01-31">http://www.xbrlsite.com/2014/US-GAAP-2014-AsReleased/us-gaap-dis-lea-pre-2014-01-31</a> ModelStructure.xml

That network was entirely remodeled in order to create a more consistent representation of the information. This is a rendering of that remodeled version:

http://www.xbrlsite.com/2014/US-GAAP-2014-Remodeled/831000-lea ModelStructure.html

(Computer readable version): <a href="http://www.xbrlsite.com/2014/US-GAAP-2014-Remodeled/831000-lea">http://www.xbrlsite.com/2014/US-GAAP-2014-Remodeled/831000-lea</a> ModelStructure.xml

If you look at the top level concepts you can see the inconsistencies in organizing the concepts. So for example, this is the first layer of report elements within the as released US GAAP XBRL Taxonomy:

Looking at the next level down you continue to see the inconsistencies grow. For example, here you see a mixture of all sorts of different pieces.

```
à-831000 - Disclosure - Leases
  È-Leases [Abstract]
      Leases of Lessee Disclosure [Text Block]

    Leases of Lessor Disclosure [Text Block]

    ≜ Leases, Operating [Abstract]
       B-Operating Leases of Lessee Disclosure [Table Text Block]
       B-Operating Leases of Lessor Disclosure [Text Block]
          Description of Lessor Leasing Arrangements, Operating Leases
         ⊕ Schedule of Property Subject to or Available for Operating Lease [Table Text Block]
           #-Property Subject to or Available for Operating Lease, by Major Property Class [Table]
         #-Operating Leases, Income Statement [Abstract]
          **Operating Leases, Future Minimum Payments Receivable [Abstract]
           Operating Leases, Future Minimum Payments Receivable, Remainder of Fiscal Year
            Operating Leases of Lessor, Contingent Rentals, Description of Variable Rate Basis
            Operating Leases of Lessor, Contingent Rentals, Basis Spread on Variable Rate
    Ė-Leases, Capital [Abstract]
       Capital Leases in Financial Statements of Lessee Disclosure [Text Block]
         ⊕ Capital Leases of Lessee [Abstract]

    Description of Related Party Leasing Arrangements

       B-Capital Leases in Financial Statements of Lessor Disclosure [Text Block]
         ⊕ Capital Leases of Lessor [Abstract]
         Ė-Leveraged Leases [Abstract]
    B-Sale Leaseback Transaction Disclosure [Text Block]
       B-Schedule of Sale Leaseback Transactions [Table Text Block]
         B-Sale Leaseback Transaction [Table]
       #-Present Value of Future Minimum Lease Payments, Sale Leaseback Transactions, Fiscal Year Maturity [Abstract]
       Minimum Lease Payments. Sale Leaseback Transactions. Remainder of Fiscal Year
```

The remodeld US GAAP XBRL Taxonomy Remodeled was created to provide a number of things, one of which was consistency. These are the top level concepts:

```
B-Leases [Abstract]
B-Leases, General Information on All Types of Leases [Abstract]
B-Leases, Operating [Abstract]
B-Leases, Capital [Abstract]
B-Sale Leaseback Transactions [Abstract]
```

And these are the next levels which show [Abstract] report elements which breaks leases down by general information, operating leases, capital leases, leases relating to a lessee, leases relating to a lessor, and sales-leaseback transactions.

While the US GAAP XBRL Taxonomy as it was released does a pretty good job of grouping pieces into the same sort of categories, that categorization is

harder to read because of the inconsistent representation of the pieces: some within a [Table], others not, [Text Block]s in inconsistent locations, etc. In creating this representation consistently one starts to see the inconsistencies of the US GAAP XBRL Taxonomy.

```
831000 - Disclosure - Leases
  ≜ Leases [Abstract]
    E-Leases, General Information on All Types of Leases [Abstract]
      ≜-Leases, General Information on All Types of Leases [Table]
    Ė Leases, Operating [Abstract]
      - Operating Leases of Lessee [Abstract]
        ⊕ Operating Leases of Lessee Disclosure [Table]
        B-Operating Leased Assets, by Lease Arrangement, Counterparty, and Asset Type [Table]
      B Operating Leases of Lessor [Abstract]
        ⊕ Operating Leases of Lessor Disclosure [Table]
        #-Property Subject to or Available for Operating Lease, by Major Property Class [Table]
    B Capital Leases of Lessee [Abstract]
        ⊕ Capital Leases of Lessee Disclosure [Table]
        B Capital Leases of Lessor [Abstract]
        B-Capital Leases of Lessor Disclosure [Table]
        ≜-Leveraged Leases [Table]
      B Capital Leases Other Information [Abstract]
        B Sale Leaseback Transactions [Abstract]
      B-Sale Leaseback Transaction Disclosure [Table]
```

One significant inconsistency is in the providing of [Text Block] level disclosures and detailed level disclosures which are consistent with how SEC XBRL financial filers are using the US GAAP XBRL Taxonomy.

## Issue #1: Mismatched [Table Text Block]s, [Text Block]s and detailed level concepts.

For example, for this filing:

http://www.sec.gov/Archives/edgar/data/1467373/000146737312000170/0 001467373-12-000170-index.htm This is the detailed disclosure for Future Minimum Payments Receivable under Operating Leases:

https://eri.xbrlcloud.com/edgar-report-information/rest/entities/0001467373/filings/0001467373-12-000170/components/4377767/rendering

	Period [Axis]
Leases [Abstract]	2012-08-31
Leases [Abstract]	
Operating lease payments	
2013	443,086,000
2014	354,371,000
2015	284,459,000
2016	217,222,000
2017	169,951,000
Thereafter	648,989,000
Operating lease payments	2,118,078,000

The appropriate concepts where used which came from the US GAAP XBRL Taxonomy:

Operating Leases, Future Minimum Payments Receivable [Roll Up]
Operating Leases, Future Minimum Payments Receivable, Current
Operating Leases, Future Minimum Payments Receivable, in Two Years
Operating Leases, Future Minimum Payments Receivable, in Three Years
Operating Leases, Future Minimum Payments Receivable, in Four Years
Operating Leases, Future Minimum Payments Receivable, in Five Years
Operating Leases, Future Minimum Payments Receivable, Thereafter
Operating Leases, Future Minimum Payments Receivable, Total

However, there is no text block which corresponds to this disclosure either at the individual table level or the note text block level. And so, on the note level text block the filer created an extension concept:

#### acn:LeaseCommitmentsTextBlock

https://eri.xbrlcloud.com/edgar-report-information/rest/entities/0001467373/filings/0001467373-12-000170/components/4377728/rendering

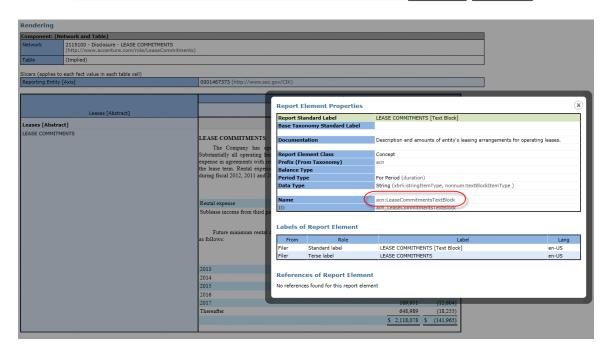
#### LEASE COMMITMENTS

The Company has operating leases, principally for office space, with various renewal options. Substantially all operating leases are non-cancelable or cancelable only by the payment of penalties. Rental expense in agreements with rent holidays and scheduled rent increases is recorded on a straight-line basis over the lease term. Rental expense, including operating costs and taxes and sublease income from third parties, during fiscal 2012, 2011 and 2010 was as follows:

	 riscal				
	2012		2011		2010
Rental expense	\$ 541,182	\$	493,734	\$	467,838
Sublease income from third parties	(33,171)		(32,503)		(30,741)

Future minimum rental commitments under non-cancelable operating leases as of August 31, 2012, were as follows:

	Operating Lease Payments		Lease Subleas	
2013	S	443,086	\$	(30,992)
2014		354,371		(30,958)
2015		284,459		(27,055)
2016		217,222		(22,101)
2017		169,951		(12,604)
Thereafter		648,989		(18,255)
	\$	2,118,078	\$	(141,965)



And on the table level text block, the filer also created an extension concept:

#### acn:ScheduleOfLeaseCommitmentsTableTextBlock

https://eri.xbrlcloud.com/edgar-report-information/rest/entities/0001467373/filings/0001467373-12-000170/components/4377745/rendering

Future minimum rental commitments under non-cancelable operating leases as of August 31, 2012, were as follows:

		Operating Lease Payments		Operating Sublease Income
2013	S	443,086	\$	(30,992)
2014		354,371		(30,958)
2015		284,459		(27,055)
2016		217,222		(22,101)
2017		169,951		(12,604)
Thereafter		648,989		(18,255)
	\$	2,118,078	\$	(141,965)

**POINT**: It seems that there should be a 1-to-1 correlation between the note level, the table level, and the detail in terms of what the US GAAP XBRL Taxonomy provides in order to create this disclosure or any other disclosure.

What is happening now is one of two things generally: (a) the filer creates an extension concept, (b) the filer picks a concept which they think is "in the ball park" but really is not the same as the detail and inconsistent with the choices of other filers.

Also, from looking at SEC filings, it seems that filers are struggling to figure out which US GAAP XBRL Taxonomy [Text Block] or [Table Text Block] to use for these note level representations. Part of the reason is that the information varies significantly. For example, some filers put lease disclosures in commitments and contingencies notes, others use a leases not, and others do different things. It seems that because a note is presentation oriented, the filers should not even be required to use a US GAAP XBRL Taxonomy concept for this level of representations. They should, perhaps, simply create their own concepts for the way they organize their notes.

## Issue #2: SEC Filing disclosures tend to be very small, but the US GAAP XBRL Taxonomy pieces tend to be very large.

Keeping with that same disclosure of future minimum lease payments receivable, there were three general patterns which filers followed. An analysis of 50 such disclosures reviled the following:

27 filers (54%) represented the disclosure as a single component of a network which looked similar to the following:

	Period [Axis]
Leases [Abstract]	2012-12-31
Leases [Abstract]	
Annual future minimum lease rentals receivable	
2013	608,330,000
2014	514,321,000
2015	444,745,000
2016	383,324,000
2017	273,609,000
Thereafter	654,895,000
Total	2,879,224,000

9 filers (18%) represented the disclosure with another disclosure in the same network which looked similar to the following:

	Period [Axis]
Leases [Abstract]	2012-08-31
Leases [Abstract]	
Operating lease payments	
2013	443,086,000
2014	354,371,000
2015	284,459,000
2016	217,222,000
2017	169,951,000
Thereafter	648,989,000
Operating lease payments	2,118,078,000
Operating sublease income	
2013	(30,992,000)
2014	(30,958,000)
2015	(27,055,000)
2016	(22,101,000)
2017	(12,604,000)
Thereafter	(18,255,000)
Operating sublease income	(141,965,000)

14 filers (28%) represented the disclosure using a [Table] and added one or more [Axis] to the information being represented which looked similar to the following two examples:

2		Period [Axis]									
	2013-02-28		2012-12-31								
Scheduled	Lease Terminations by Aircraft Type [Axis]						Lease Terr	minations b	y Aircraft T	ype [Axis]	-
by aircraft type for T	Lease Terminations by Aircraft Type [Domain]	Aircrafts [Member]	Airbus A 319, 100 [Member]	A-320- 200 [Member]	Airbus A 321, 200 [Member]	A-330- 200 [Member]	A 330300 [Member]	B-737- 700 [Member]	B-737- 800 [Member]	B 767, 300 ER [Member]	The state of the s
2013		6	1	2				1		2	1
2014		10		1				2	6	1	í
2015		15	2	2					11		1
2016		13	1	2	2	1		2	5		₹
2017		17	2	4	1	1			8		€
Thereafter		94	1	18	2	12	3	3	8		4
Total		155	7	29	5	14	3	8	38	3	

	Real Estate Property Ownership [Axis]				
	Apartment Building [Member]	Real Estate Prop	perties [Domain]		
	Range [Axis]	Range	[Axis]		
Real Estate Properties	Maximum [Member]	Maximum [Member]	Range [Domain]		
Future minimum rentals to be received pursuant to non- cancellable operating leases					
2013			2,225,000		
2014			2,227,000		
2015			2,186,000		
2016			2,057,000		
2017			1,113,000		
Thereafter			10,361,000		
Total			20,169,000		
Lease term	P1Y	P1Y			

No instances of the entire set of concepts represented within the US GAAP XBRL taxonomy being expressed within one network of a filer has been seen. Generally, report components of SEC XBRL financial filings tend to be rather small.

The following information summarizes an analysis of 7160 SEC XBRL financial filings to understand the size of the report components. The averages tend to be quite small.

Report Component Category	Report Component Sub Category	Networks	Concepts	Extension Concepts	Average Concepts per Network	Concepts Extension Percent
Disclosure	Detail	165,072	1,134,543	300,301	7	26.47%
Disclosure	TextBlock	104,178	104,149	13,853	1	13.30%
Statement	Detail	41,578	816,537	97,208	20	11.90%
Document	Detail	6,805	96,060	54	14	0.06%
Statement	TextBlock	1,009	997	150	1	15.05%
Schedule	Detail	843	7,681	1,010	9	13.15%
Schedule	TextBlock	757	756	29	1	3.84%
Document	TextBlock	42	42	E	1	14.29%
		320,284	2,160,765	412,611	7	19.10%
	Report Component Sub Category	Networks	Concepts	Extension Concepts	Average Concepts per Network	Concepts Extension Percent
67%	Detail	214,298	2,054,821	398,573	10	12.24%
33%	TextBlock	105,986	105,944	14,038	1	6.65%
		320,284	2,160,765	412,611	2	19.10%

However, the US GAAP XBRL Taxonomy tends to have rather large networks.

**POINT**: Why should there be a mismatch between how the US GAAP XBRL Taxonomy is provided and how it is used by filers?

# Issue #3: Consistency at the level of what is disclosed is not consistent so that it is hard to see that there really can and should be consistency.

The best way to see the opportunity which exists is to experience a consistently represented taxonomy and then compare and contrast that to

the existing US GAAP XBRL Taxonomy. That is one of the reasons a remodeled taxonomy was created initially. However, a more compelling reason was to actually be able to use the taxonomy to do interesting and useful things.

The first thing you see when the taxonomy is well organized (or at least better) is that missing [Text Block]s stand out. So, you can see that #1 correlates the [Table] which is used to provide detailed level disclosures and its [Text Block]. And #2 does the same thing for the future minimum payments under capital leases. However, there are three other disclosures which a filer could report which have no [Text Block]s. This clearly stands out in this organization of the taxonomy.

```
Capital Leases of Lessee Disclosure [Table]

Legal Entity [Axis]

Capital Leases of Lessee Disclosure [Line Items]

Capital Leases of Lessee Disclosure [Line Items]

Capital Leases in Financial Statements of Lessee Disclosure [Text Block]

Capital Leases, Future Minimum Lease Payments [Table Text Block]

Capital Leases, Future Minimum Payments, Present Value of Net Minimum Payments, Fiscal Year Maturity [Roll Up]

Capital Leases, Future Minimum Payments, Present Value of Net Minimum Payments, Rolling Maturity [Roll Up]

Capital Leases, Income Statement of Lessee [Hierarchy]

Capital Lease Obligations [Roll Up]
```

Further, to write a query to grab information from the representation of the taxonomy is trivial because the taxonomy is organized consistently. To experience this for yourself, I would encourage those who can program using Excel or other language to write a program which grabs information from these two XML files which are representations of the "as released" and the "remodeled" US GAAP XBRL Taxonomy information. The meaning of the information has not changed at all. But, the usability of the information in the taxonomy representations is significantly different:

As released: <a href="http://www.xbrlsite.com/2014/US-GAAP-2014-AsReleased/us-gaap-dis-lea-pre-2014-01-31">http://www.xbrlsite.com/2014/US-GAAP-2014-AsReleased/us-gaap-dis-lea-pre-2014-01-31</a> ModelStructure.xml

This video shows the power of a good taxonomy representation:

http://www.youtube.com/watch?v=fOLbSjQjMUE

That query tool is powerful because it uses the remodeled version of the US GAAP XBRL Taxonomy rather than the one provided by the FASB.

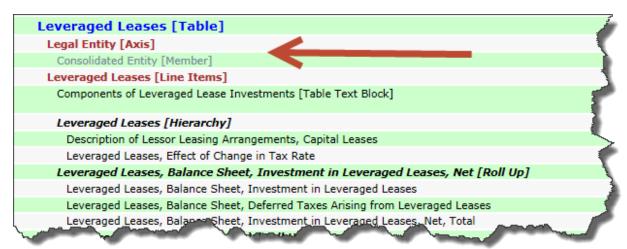
**POINT**: All one needs to do is try and run a query against the as released and remodeled versions of this one US GAAP XBRL Taxonomy network in order to realize how powerful a well-organized taxonomy is. Further, simply looking at the as released and remodeled versions of the taxonomy an thinking about them one can decide for themselves which organization they might prefer.

Some things to notice in the remodeled version of the US GAAP XBRL Taxonomy are:

All concept arrangement patterns are explicitly identified. For example, look for [Roll Up] in the remodeled version. It makes it easy to identify roll ups.



All [Axis] are explicit. For example, notice that the Legal Entity [Axis] is explicitly represented on each [Table].



There are many, many other nuances which help make the remodeled version of the US GAAP XBRL Taxonomy easier to understand than the as released version.