



## Chinese Drywall and Other Construction Defect Losses that Span Multiple Policies

Presented by:  
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September 21, 2010

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## Agenda

- Main causes and issues for defective construction
- Examples
- Coverage issues
- Basic Projection techniques

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# Main Causes



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# Improper Site Selection and/or Soil Preparation

theaustinconsulting.com



cat.com

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# Structural Design

climatechangeconnection.org



canadacataequipe.blogspot.com

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Defective Building Materials

articles.sfgate.com

woodstore.net



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Negligent Construction

centralnewyorkinjurylawyer.com

superstock.com



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Main Issues



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## Water Damage

franksservices.com

sprestators.com



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## Structural Failure

geconsult.co.nz

dynetwork.com



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## Mechanical

overlandparkairconditioning.com

boyntonbeachairconditioner-repair.com



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# Examples



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## EIFS

- Exterior Insulation and Finish Systems
- EIFS is an exterior wall covering system designed as an alternative to stucco.
- It uses three layers bonded together to form a barrier designed to completely seal out water.
- However, if water does seep in, it does not allow the water to drain and can lead to rotting.

lifetime-remodeling.com



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## Kitec

- Kitec brass pipe fittings were used to connect flexible composite pipe in homes throughout the western United States.
- When water runs through these fittings, a chemical reaction called dezincification occurs, causing corrosion which eventually blocks the pipe. This can lead to leaks and even bursting pipes.

plumbingdefect.com



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## Chinese Drywall

- During the housing boom from 2004 to 2007, drywall was imported to the US from China due to a shortage of American made drywall.
- The drywall has been found to emit sulfurous gases which smell like rotten eggs and can cause copper pipes, wiring, and air conditioner coils to corrode.



buildingdiagnosticsgroup.com

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## Coverage Issues



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## Triggers

- **Manifestation**
  - The date of occurrence is when the property damage manifests is apparent.
- **Exposure**
  - All policy periods during which the property has been exposed. (often found in claims involving long-term bodily injury claims like asbestosis)
- **Continuous**
  - All policies in effect from the date of exposure through manifestation including all policies from construction through discovery and potentially further.
- **Injury-in-Fact**
  - All policies in effect when injury can be demonstrated without regard to when the damage is discovered.



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## Claims Made or Occurrence

- Completed Operations Coverage
  - Like Products Liability, provides insurance for claims resulting after a construction project is completed.
- Issues
  - Different insurers over time
  - Different insurers for Primary versus Umbrella
  - Different policy conditions from year to year
    - ALAE within/without
    - SIR/Deductibles
    - Captives
    - Coverage wording



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## Montrose

- 1995 the California Supreme Court ruled in *Montrose Chemical Corp. v. Admiral Insurance Co.*
  - Continuous injury trigger governs coverage under the standard CGL policy.
  - Known losses can be insured as long as either the scope of damage occurring during the policy period or the insured's ultimate liability for that damage is undetermined.
- CG 00 57 adds a third condition to section b of the Coverage A insuring agreement.
  - (3) Prior to the policy period, no insured listed under Paragraph 1. of Section II-Who Is An Insured and no "employee" authorized by you to give or receive notice of an "occurrence" or claim, knew that the "bodily injury" or "property damage" had occurred, in whole or in part.
  - If such a listed insured or authorized "employee" knew, prior to the policy period, that the "bodily injury" or "property damage" occurred, then any continuation, change or resumption of such "bodily injury" or "property damage" during or after the policy period will be deemed to have been known prior to the policy period.
- Colorado HOUSE BILL 10-1394 (new)
  - Faulty workmanship constitutes an "occurrence" and that claims for faulty workmanship fall within a general liability policy's insuring agreement.



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## Statute of Limitations/Repose

- Statute of Limitation
  - A type of federal or state law that restricts the time within which legal proceedings may be brought. These vary by state.
- Statutes of Repose
  - Statutes of repose terminate a manufacturer's liability for defective products after a statutorily specified number of years. A person injured after the cut-off date has no recourse to hold the manufacturer of the defective product accountable. These also vary by state.
- A statute of limitation may apply to bar lawsuits a set number of years after the product causes an injury; but a statute of repose may also apply, barring an action after a certain number of years from the date when the product was initially delivered.



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# Basic Projection Techniques



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## Accident Year Paid

Data set for example purposes only – not to be considered typical

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Period 8	Period 9	Period 10	Period 11	Period 12
1996	21,369	86,065	51,945	100,907	134,002	243,134	1,161,570	1,789,030	3,779,962	9,202	(82,977)	(342,893)
1997	147,356	898,462	148,552	330,168	340,088	2,859,339	3,120,631	5,313,186	352,032	(553,026)	(923,688)	(123,415)
1998	59,095	70,993	299,221	1,127,660	3,884,804	1,233,673	2,313,674	306,318	830,652	(620,887)	293,047	(523,574)
1999	8,566	200,958	1,270,305	2,646,801	846,013	1,213,939	286,316	200,755	(47,206)	392,556	(183,222)	(313,318)
2000	309,699	798,535	1,593,150	1,511,513	814,792	126,107	106,613	<u>28,215</u>	268,993	180,106	(290,300)	(257,959)
2001	75,860	1,298,199	1,314,345	1,634,612	705,036	1,087,642	<u>1,079,614</u>	341,896	336,201	248,530	(442,655)	(465,198)
2002	69,774	541,563	780,461	981,527	1,123,766	<u>2,427,274</u>	1,043,615	322,381	438,455	262,735	(366,482)	(337,861)
2003	22,318	483,443	5,801,543	2,166,111	<u>6,962,141</u>	1,557,403	1,789,436	67,020	1,147,103	780,791	(1,253,975)	(1,115,244)
2004	54,932	231,189	363,626	<u>3,611,264</u>	2,030,100	609,623	707,036	25,030	454,519	309,689	(497,337)	(442,240)
2005	24,238	339,000	<u>738,528</u>	709,694	902,291	909,022	544,913	132,438	250,399	164,698	(237,252)	(216,166)
2006	64,213	<u>160,877</u>	1,344,904	1,284,217	1,448,391	179,634	413,125	(30,887)	306,765	211,738	(349,137)	(308,560)
2007	<u>1,461</u>	20,827	145,102	138,054	152,814	2,413,408	825,539	467,647	143,588	63,679	(16,751)	(33,378)



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## Accident Year Incurred

Data set for example purposes only – not to be considered typical

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Period 8	Period 9	Period 10	Period 11	Period 12
1996	65,510	381,151	(14,431)	(20,762)	237,838	1,499,095	4,005,390	(491,133)	4,792,493	(2,088,387)	(916,000)	(522,648)
1997	290,917	936,101	114,804	542,421	1,483,263	5,063,282	1,504,405	6,079,857	(297,089)	(1,609,919)	<u>(1,428,638)</u>	(1,149,639)
1998	70,335	141,489	968,787	2,708,216	3,695,667	135,343	3,504,960	384,992	918,804	<u>1,873,442</u>	(1,852,226)	(851,218)
1999	52,028	489,799	2,240,098	2,835,012	522,971	1,281,336	32,363	(88,079)	<u>32,363</u>	203,045	(740,283)	(409,019)
2000	1,028,942	1,227,147	1,704,647	1,825,927	62,765	(125,904)	46,489	<u>39,267</u>	435,334	77,883	(592,047)	(325,971)
2001	641,247	2,858,694	535,646	2,279,219	1,417,451	3,299,632	<u>2,414,103</u>	80,231	(3,800)	(2,558,365)	(1,507,300)	(792,494)
2002	431,381	968,693	2,393,347	1,513,811	3,338,874	<u>5,027,272</u>	11,283,579	89,273	98,300	(2,566,609)	(1,660,067)	(881,148)
2003	1,022,277	4,240,643	7,038,443	12,401,110	<u>5,005,772</u>	<u>5,851,008</u>	(3,127,411)	268,934	512,418	(7,141,123)	(5,030,883)	(2,653,080)
2004	1,024,211	(114,240)	2,374,412	<u>8,377,327</u>	3,209,492	2,411,899	(2,292,505)	134,622	77,399	(4,063,888)	(2,522,502)	(1,329,210)
2005	312,392	791,361	<u>1,244,078</u>	2,149,750	1,344,550	1,438,218	(312,642)	52,203	156,638	(1,130,742)	(864,973)	(154,369)
2006	1,460,057	<u>199,550</u>	<u>1,083,318</u>	3,259,784	1,912,650	1,782,671	(880,568)	80,235	165,765	(2,095,030)	(1,491,782)	(791,362)
2007	<u>21,465</u>	1,190,459	382,304	179,018	59,493	750,723	950,320	2,495	246,031	592,762	(27,405)	(23,082)



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## Selected Ultimate

Data set for example purposes only – not to be considered typical

Year	LR
1996	58%
1997	90%
1998	69%
1999	33%
2000	24%
2001	37%
2002	25%
2003	57%
2004	20%
2005	12%
2006	14%
2007	20%



## Report Year Paid

Data set for example purposes only – not to be considered typical

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Period 8	Period 9
1996	25,369	14,133	1,265						
1997	219,288	370,352	68,182	35,701	16,915	179,113	8,746		
1998	637,885	179,265	24,151	161,042	(82,978)				
1999	81,692	636,614	714,468	1,622,300	1,841,635	1,162,997	198,955	(642,069)	(671,894)
2000	637,541	2,661,303	7,036,960	816,479	64,749	16,826	20,198	11,925	(1,160,396)
2001	301,860	3,656,083	3,382,040	9,749,487	87,987	(1,162,376)	43,578	(537,079)	(1,598,723)
2002	1,099,160	2,935,835	2,186,686	380,690	185,059	(112,582)	53,064	(221,670)	(659,845)
2003	1,394,511	2,169,530	5,683,455	470,577	(337,231)	(332,730)	73,053	(305,056)	(908,059)
2004	1,035,007	1,749,332	2,489,332	3,820,810		(322,573)	70,823	(295,743)	(880,340)
2005	805,953	3,702,087	8,946,491	5,522,264	(673,090)	147,781	(617,107)	(1,836,941)	
2006	583,661	2,889,212	5,483,477	3,664,419	(446,644)	98,063	(409,495)	(1,218,343)	
2007	1,586,422	4,873,691	10,187,310	6,832,750		(832,821)	182,851	(763,552)	(2,272,865)

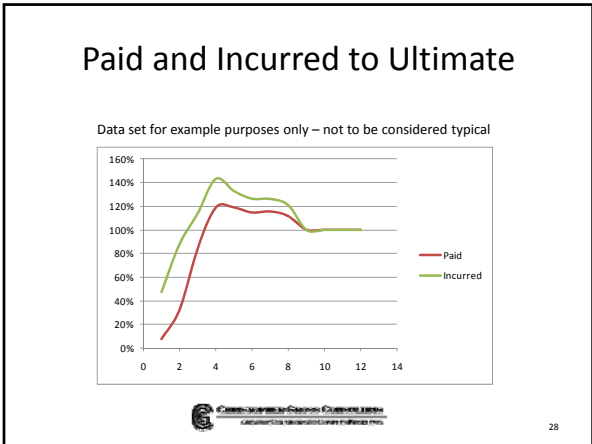


## Report Year Incurred

Data set for example purposes only – not to be considered typical

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Period 8	Period 9
1996	69,510	(30,008)	1,265						
1997	710,076	183,861	(103,646)	103,873	56,407	111,508	(163,864)		
1998	786,874	65,418	193,499	(43,447)	(82,976)	(2)			
1999	316,777	1,064,823	1,177,244	3,799,047	(212,497)	875,359	(20,057)	(826,526)	(1,229,470)
2000	1,905,572	4,306,233	6,009,776	215,204	(1,189,278)	(14,376)	20,198	11,925	(1,160,397)
2001	5,510,231	7,344,647	(1,968,511)	9,708,239	(28,563)	(1,623,790)	(23,718)	(1,244,762)	(3,750,915)
2002	3,997,071	3,220,976	1,246,620	(739,463)	(591,151)	(273,760)	(8,662)	(156,015)	(949,200)
2003	4,328,003	5,880,104	1,281,063	967,041	(864,372)	(691,572)	(13,915)	(754,294)	(2,224,013)
2004	9,137,979	678,626	2,731,193	1,365,795	(999,114)	(940,183)	(15,502)	(1,248,193)	(3,041,953)
2005	6,721,004	12,364,300	2,468,232	2,144,900	(2,386,733)	(1,901,420)	(37,032)	(2,153,745)	(6,122,065)
2006	8,920,877	1,331,600	3,016,122	2,744,992	(1,197,141)	(816,870)	(18,575)	(751,404)	(2,614,151)
2007	14,274,979	6,681,320	7,795,864	5,741,997	(3,094,286)	(2,222,322)	(48,011)	(2,208,773)	(7,126,982)






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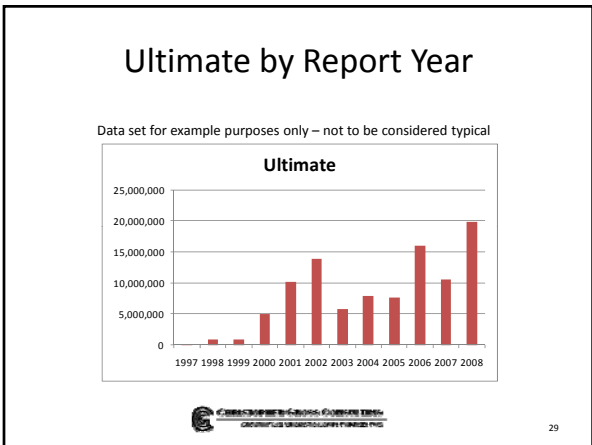
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### Report Year Closed Counts

Data set for example purposes only – not to be considered typical

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Period 8	Period 9	Period 10
1996		5	1							
1997	8	6	10	1			2	2		
1998	11	12	1	4	-1					
1999	6	6	8	9	2	-1	2		8	
2000	12	7	7	4	6	10				2
2001	6	26	24	8	4	1	3			9
2002	19	34	17	7	4	7	5			8
2003	20	18	30	13	8	6	4			7
2004	18	43	20	22	9	8	11			16
2005	25	41	27	18	8	10	2			7
2006	20	67	46	22	10	12	3			9
2007	51	49	38	15	7	10	-2			2

California Workers' Compensation Claims  
 CALIFORNIA WORKERS' COMPENSATION BOARD

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## Report Year Reported Counts

Data set for example purposes only – not to be considered typical

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Period 8	Period 9	Period 10
1996	9	-3								
1997	30	-5	3		1					
1998	28	-1	2	-1		-1				
1999	35	8	-1		-5	-1				
2000	50	3	-5	-2	-1	1				
2001	87	-3	-11	4			1			
2002	106	-2	-4	-6	1	1	1			
2003	135	-17	-10	-8	1	1	1			
2004	191	-53	3	-3	1	1	1			
2005	225	-65	-13	-7	1	1	1			
2006	273	-75	-9	-9	1	2	1			
2007	247	-69	-9	-8	1	1	1			



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## Report Year Statistics

Data set for example purposes only – not to be considered typical

### Ultimate by Report Year

Year	Count	Dollars	Severity
1996	6	40,767	6,795
1997	29	898,216	30,973
1998	27	919,365	34,051
1999	39	4,944,698	126,787
2000	48	10,105,585	210,533
2001	81	13,922,857	171,887
2002	100	5,746,417	57,464
2003	106	7,908,048	74,604
2004	146	7,666,647	52,511
2005	147	15,997,441	108,826
2006	189	10,615,451	56,166
2007	170	19,793,786	116,434



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## Accident Year Closed

Data set for example purposes only – not to be considered typical

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Period 8	Period 9	Period 10	Period 11	Period 12	tail
1996	7	6	3	10	3	4	9	11	7	12	7	3	4
1997	3	12	9	4	5	4	13	1	10	7	8	1	3
1998	3	4	2	5	7	4	3	14	11	10	26	5	10
1999	5	5	4	7	3	9	6	3	12	-6			2
2000	6	6	16	5	10	7	2	3	-16	16	2	2	5
2001	1	17	31	23	20	14	27	11	16	22	13	4	9
2002	2	17	4	20	15	20	7	13	12	25	14	4	9
2003	2	5	14	11	37	13	10	15	16	28	16	5	11
2004	4	15	18	10	23	19	50	16	50	34	27	7	14
2005	3	9	23	10	23	14	3	16	11	31	16	5	11
2006	2	12	14	10	19	12	5	13	11	26	14	4	10
2007	2	5	9	7	12	8	4	9	8	17	9	3	7



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### Accident Year Reported

Data set for example purposes only – not to be considered typical

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Period 8	Period 9	Period 10	Period 11	Period 12	tail
1996	9	9	2	7	10	10	16	15	9	-2	-5	-3	0
1997	18	14	10	4	17	8	7	5	4	-1	-2	-1	0
1998	7	7	7	10	7	4	28	14	26	3	1	1	0
1999	13	10	8	5	6	8	3	2					0
2000	29	15	9	1	4	3	1						0
2001	29	34	30	28	26	43	4	10	2	2			0
2002	19	30	29	9	25	25	14	8	2	2			0
2003	21	33	41	16	18	26	15	9	2	2			0
2004	28	30	60	69	37	45	27	15	3	3			0
2005	29	19	21	21	18	21	14	7	21	2	1		0
2006	18	22	30	19	18	22	13	7	1	1			0
2007	4	5	7	10	6	5	6	2	54	1	1	1	0



### Severity by Report Year/Accident Year

Data set for example purposes only – not to be considered typical

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Period 8	Period 9	Period 10	Period 11	Period 12
1996												
1997												
1998												
1999												
2000												
2001												
2002												
2003												
2004												
2005												
2006												
2007												



### Incremental Ultimates

Data set for example purposes only – not to be considered typical

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Period 8	Period 9	Period 10	Period 11	Period 12
1996												
1997												
1998												
1999												
2000												
2001												
2002												
2003												
2004												
2005												
2006												
2007												



### Accident Year Ultimate

- Current Case Incurred
- Case Development from the Report Year analysis – allocate to Accident Year
- True IBNR from Frequency-Severity process



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### New Issues

- No known claims
- Severity may be determinable/homogeneous
- Potential for lack of coverage
- Hits the entire diagonal at once
- Do you include in overall data in the future



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### Exposures – Home Counts

Adjustment:	20%	40%	60%		Adjusted
	2006	2007	2008	Total	Total
State 1	1,096	2,103	1,734	4,933	2,101
State 2	4	9	6	19	8
State 3	1,448	1,466	582	3,496	1,225
State 4	3,572	5,180	3,115	11,867	4,655
State 5	3,613	4,408	2,566	10,587	4,025
State 6	2,389	4,275	2,425	9,089	3,643
Total	12,122	17,441	10,428	39,991	15,658



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## Industry Data

- Method 1: CPSC.gov Drywall Information Center
- Method 2: Import data (100,000 total homes)
- Method 3: Import data (36,000 total homes)

Industry	Method One		Method 2		Method 3	
	Reported Incidents	Company Allocated Market	# Homes Imported by State	Company Market Share	# Homes Imported by State	Company Market Share
State 1	669	19,000	381	-	3,431	69
State 2	227	6,467	129	-	1,164	23
State 3	194	5,527	111	-	995	20
State 4	249	7,094	142	14,500	290	3,887
State 5	2,031	57,863	1,157	85,000	1,700	25,715
State 6	140	3,989	80	500	10	808
<b>Total</b>	<b>3,510</b>	<b>100,000</b>	<b>2,000</b>	<b>100,000</b>	<b>2,000</b>	<b>36,000</b>



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## Frequency / Severity

State	Average of Three Methods	Total Adjustment	Adjusted Market Share	Per Claim Cost	Estimated Gross of Ded Claims
State 1	150	43%	64	100,000	6,400,000
State 2	51	42%	21	100,000	2,100,000
State 3	43	35%	15	100,000	1,500,000
State 4	170	39%	67	100,000	6,700,000
State 5	1,124	38%	427	100,000	42,700,000
State 6	35	40%	14	100,000	1,400,000
<b>Total</b>	<b>1,573</b>	<b>39%</b>	<b>608</b>		<b>60,800,000</b>



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## Added Adjustments

- Coverage triggers
  - Manifestation states with expiring/new policies
- How does the Pollution Exclusion apply
  - There may only be LAE in some states
- How does ALAE apply
- How do policy deductibles apply
- How do claims/claimants work in these states and for this policy
- How do policy aggregates apply
- Potential for BI Exposure



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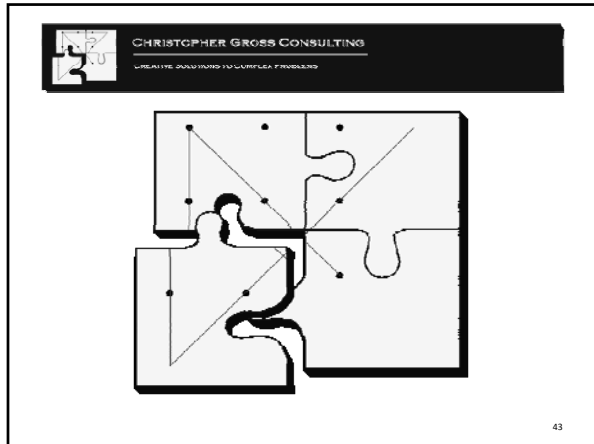
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