

8th Annual PMICOS Scheduling Conference
SAN FRANCISCO 2011
FAIRMONT SAN FRANCISCO • MAY 1-4, 2011

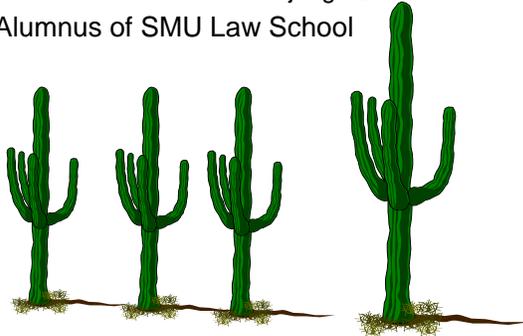
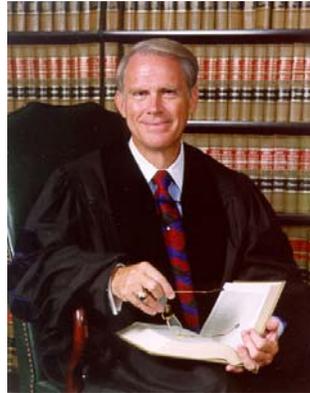
PMI
College of Scheduling

Mock Trial 2011
Hasty Construction v Dauphin Resorts
“... but what I meant to say was ...”

Hon. John M. Marshall

Presiding

- Senior Judge of the 14th Judicial District Court, Dallas County, TX
- **MC² LEGAL, PLLC**
3418 Daniel Avenue, University Park, TX 75205
214-364-6226 Mc2judge@aol.com
- Alumnus of SMU Law School



by Fred

The Hon. John M. Marshall will be presiding today. Our court system has some impressive looking buildings. Our Legislatures pass some fancy looking laws. Our Executives may strut before us to the tune of “Hail to the Chief.” But it is the Judge who **is** the law.

At our first session in 1998, when Dan’s partner Bob Meyers swore expert Jim O’Brien in at the start of the trial, he jokingly said “this doesn’t really count because we were not in a real courthouse.” Judge Marshall interrupted, and reminded Bob and all of us, “**The Court is where I sit.**”

I hope all goes well at today’s mock trial, but I have brought my toothbrush along, just in case!

Shootout at the OK Corral

Examination & Cross-Examination of an Expert Witness



Fredric L. Plotnick, Esq., P.E.
ENPROMAC, Jenkintown, PA
Program Moderator



PRIMAVERA
How the world manages projects

September 1999

featuring:

James J. O'Brien, P.E.

O'Brien-Kreitzberg, Lawrenceville, NJ
As the Expert Witness

Robert L. Meyers, III, Esq.

Jones Day Reavis & Pogue, Dallas, TX
As the Examining Attorney

Donald O. Pratt, Esq.

Pratt & Sanderford, Arlington, TX
As the Cross-Examining Attorney

Hon. John M. Marshall

Judge of the 14th Civil District Court
As the Judge



Our Mock Trial is now in our 12th year.

Daniel D. McMillan, Esq.

Attorney for the contractor



- Jones Day
555 South Flower Street, 50th Floor
Los Angeles, CA 90071
(213) 243-2582 DDMcMillan@jonesday.com
- Co-chair of Jones Day's Domestic and International Construction Law Practice
- Author
 - "Federal And State False Claims Acts And Public Construction Projects"
 - "An Owner's Guide to Avoiding the Pitfalls of Disputes Review Boards"



by John

Dan will be acting as the attorney for the contractor today

Jeffrey B. Kirzner, Esq.

Attorney for the owner



- Jones Day
555 South Flower Street, 50th Floor
Los Angeles, CA 90071
(949) 553-7533 jkirzner@jonesday.com
- Member of Jones Day's Domestic and International Construction Law Practice
- Has represented Owners in major construction cases including:
 - Orange County Transportation Authority • County of Los Angeles
 - Los Angeles County Metropolitan Transportation Authority
 - County of San Bernardino • San Bernardino County Flood Control District



by John

Jeff will be acting as the attorney for the owner today

Timothy T. Calvey, PE

Expert for the Contractor

Timothy T. Calvey has thirty years of experience managing and studying construction projects and providing construction consulting services on numerous projects ranging from the Cleveland Browns Stadium to highway expansions to residential housing. In addition to providing CPM schedule analysis, cost impact analysis and construction defect analysis, he has assisted in negotiating settlements on numerous construction disputes and is an experienced expert witness at trials, arbitrations and mediations.



Mr. Calvey is a registered Professional Engineer (PE) with the State of Ohio, a Certified Planning & Scheduling Professional (PSP) with AACE International and a Certified Professional Estimator (CPE) with the American Society of Professional Estimators. He received his BS in Engineering and MBA from Case Western Reserve University. He is past-president of the Cleveland Chapter of the American Society of Professional Estimators and a member of the Association for the Advancement of Cost Engineering Planning and Scheduling Committee. He is also a subcommittee member of the Project Management Institute – College of Scheduling and a construction arbitrator with the American Arbitration Association.

Prior to co-founding Calvey Consulting, LLC, Mr. Calvey was the Senior Vice President for R. V. Buric Construction Management Consultants, was Manager of Construction Services for Middough & Associates, Inc., was Project Director/Senior Consultant for Hill International, and started his career with Davy McKee Corporation where his last position was Project Cost and Schedule Manager.



Calvey Consulting, LLC

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by Fred

Tim Calvey will be the expert for the contractor today

Christopher Carson, PSP, CCM, PMP

Expert for the Owner

- Chris Carson is Corporate Director of Project Controls for Alpha Corporation, a professional engineering/construction firm providing engineering design and CM services, specializing in scheduling, schedule analysis, claims avoidance, dispute resolution, and cost estimating.
- He is a CMAA Certified Construction Manager (CCM), an AACEi Planning and Scheduling Professional (PSP), and a PMI Project Management Professional (PMP). Presenting at CMAA, AACE, DBIA, and PMI College of Scheduling conferences, Mr. Carson received a 2009 College of Scheduling award for "Significant Contributions to the Scheduling Industry", earned "Best Paper in the Scheduling Track" at the 2006 AACEi national conference, and received the "Chairman's Award" from CMAA in 2006.



By Fred

Chris Carson will be the expert for the owner today

Fredric L. Plotnick, Ph.D., Esq., P.E.

Moderator



- Engineering & Property Management Consultants, Inc.
Colonade Manor #117 Jenkintown PA 19046
www.fplotnick.com 215-885-3733 fplotnick@fplotnick.com
- CPM Scheduling since 1975
- Professional Engineer and Attorney – PA, NJ, FL
- Professor of Engineering – Drexel U. – Temple U. – Philadelphia, PA
- Co-Author: *CPM in Construction Management*
- President NSPE/PSPE-Philadelphia Chapter
- Member ASCE, ACEi, PMI, ABA Forum on Construction



By John

Fred Plotnick is the author of today's Mock Trial screen play.

Dr. Plotnick is one of the pre-eminent theorists in CPM analysis and is the added author to Jim O'Brien's classic, CPM in Construction Management, as well as to Dunham and Young, and then Bockrath's, Contracts and the Legal Environment for Engineers & Architects.

... Or whatever John wants to say ...

Fred and I have collaborated on these presentations since 1999. In each, Fred has attempted to illustrate three issues of law and three issues or features of software in an educational but entertaining show. Welcome to Mock Trial 2011.

Lesson Plan



- Law – Best Evidence Rule
 - CPM – software yields different results
- Daubert – explainable – repeatable
 - How does the software calculate this result?
- Vignettes
 - Voir Dire – is the expert accepted by court?
 - Contractor’s Case – Direct – Cross – Re-Direct
 - Owner’s Rebuttal – Direct – Cross – Re-Direct
 - Closings – Instructions to the Jury – Verdict

By Fred: **Today’s Lesson Plan**

We hope that this Mock Trial Presentation will provide instruction on several issues of law and on CPM scheduling

The lessons on law will include:

a determination of the best source of relevant information for acceptance by the court and for persuasion of the factfinder

how a court may consider that two software products yield differing results from the same data – and purportedly the same algorithm

the concepts of the Daubert decision, designed to reign in “junk science”

these lessons will be illustrated by several trial vignettes including voir dire, and direct and cross examination of a witness.

Lesson Plan



- **Technical Issues for Scheduling Professionals**
- Why may CPM software yield different results?
- Does software accurately record PM's intent?
- Data transfers v limitations of software products
- Progressed v Clocked durations
- Retained Logic v Progress Override v MOOS
- A smattering of Common Sense

By Fred: **Today's Lesson Plan**

Relating to the issue that different software products yield differing results from purportedly the same input:

Does the software properly record "what the superintendent meant to say"?

Do limitations of one software recording get carried into more powerful software?

Is there a difference between saying, "Start Activity B 5 days after Activity A starts" and "Start Activity B when Activity A is 50% complete"? How can this ambiguity affect the calculated results of a delay claim? Which takes priority, the computer files or the clear intent of the PM or Superintendent?

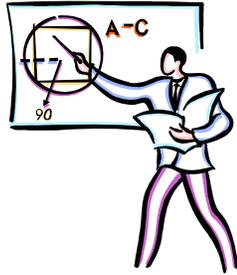
How to deal with work performed out-of-sequence from the initial logic plan - Retained Logic and Progress Override

When Common Sense may trump a computer printout.

Trade Terminology



- What is meant by “a 2x4”?
- What is meant by “an activity”?
- What is meant by “overlap A & B by 50%”? by “10 days”?
- What is meant by “when A 50% complete, start B”?
- Which takes priority?



By Fred: **Query of Panel:**

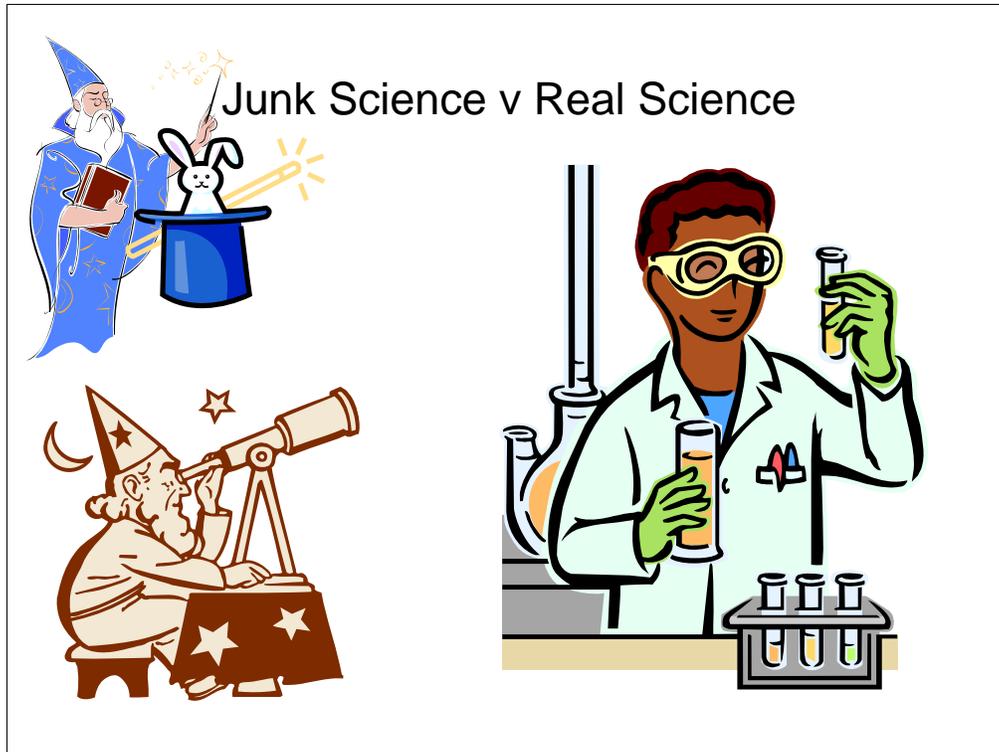
Does the software properly record “what the superintendent meant to say”?

If ordering a “2x4” what does the PM mean? what does the scheduler here? what does the software record?

follow slide animation ...

{The purpose of this slide and discussion is to suggest that the intent and meaning of the interviewed superintendent, project manager or team member supersedes the data recorded by the software - even if the contract states the “approved P6 CPM schedule is a contract document”

- 1) inherent ambiguity as trade terminology of superintendent may not be understood by scheduler - nor able to be expressed in 48 characters
- 2) inherent ambiguity where the software (even if specified) CAN not accurately record the words, meaning or intent of the superintendent



John will continue to discuss the problems of Junk Science and judicial remedies therefore

John will ask counsel, and experts, if CPM, as a field of engineering, should pass a Daubert challenge –

asking how accurate is the whole process, and if it has a scientifically established degree of error?

asking how accurate are the individual estimates of duration? – and what impact this may have?

John will ask Fred, as an Expert for the Court, to discuss. >> next slide ...

Fact Background for Mock Trial

- Dauphin Resort desires to add a General Porpoise Extension
- Work to start 17MAY - \$200,000 bonus if complete by 15NOV
- Dauphin's artists, Doozey Design, will design/fabricate a one-lift roof structure to be placed "when needed"
- Hasty Construction prepares proposal with CPM schedule prepared with Microsoft Project - shows timely completion
- Hasty and subcontractors execute project with mix of Microsoft Project and Excel and other software
- Project runs late, but then completes 18NOV
- Hasty sues for \$200,000 bonus, plus \$50,000 acceleration

Fred provides factual background to today's case.

Battle of the Experts



By John –

Comments on today's mock trial –

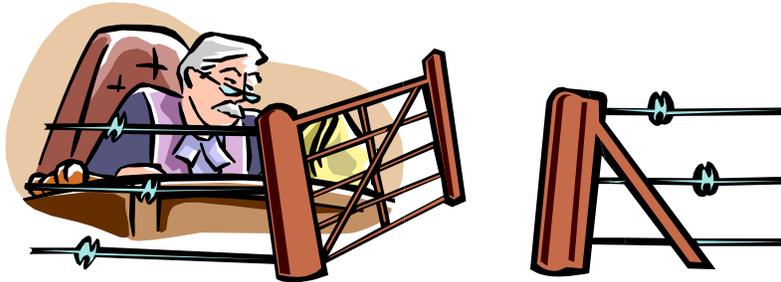
not a full trial – time would not allow full openings, acceptance by court of experts, and opening statements, direct/cross/redirect and closing by each side

several vignettes will be provided – enough to form an opinion and vote for the contractor or owner

John will then choose six members of the audience to reserved seats in the front row and swear in the jury

Voir Dire

Is the "Expert" competent to testify?



Text by Judge Marshall on Gatekeeper function of judge

Credentials v Teaching the Factfinder



Frye v Daubert

Judge Marshall lectures on law - difference of Frye and Daubert gate-keeping functions

Any additional comments by Jeff and Dan

Voir Dire of Timothy T. Calvey, PE



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Timothy T. Calvey

PE, CPE, PSP

Summary of qualifications

Thirty years of experience managing and studying construction projects, providing construction consulting services on numerous projects ranging from the Cleveland Browns Stadium to highway expansions to residential housing. In addition to providing construction defective analysis, construction cost estimating and CPM schedule analysis, have assisted in resolving numerous construction disputes and experienced as an Expert Witness at trials, arbitrations and mediations.

Education

MBA, Case Western Reserve University, Cleveland, OH
BS, Engineering, Case Western Reserve University, Cleveland, OH

Accreditations

Registered Professional Engineer (PE) – State of Ohio
Certified Professional Estimator (CPE) – American Society of Professional Estimators
Certified Planning & Scheduling Professional (PSP) – AACE International
2009 NAWIC Industry Appreciation Award Winner

First vignette - {purpose to illustrate Frye and Daubert minimum requirements}

Dan will swear in Tim – and continue voir dire to a point to include Tim’s credentials and previous court appearances

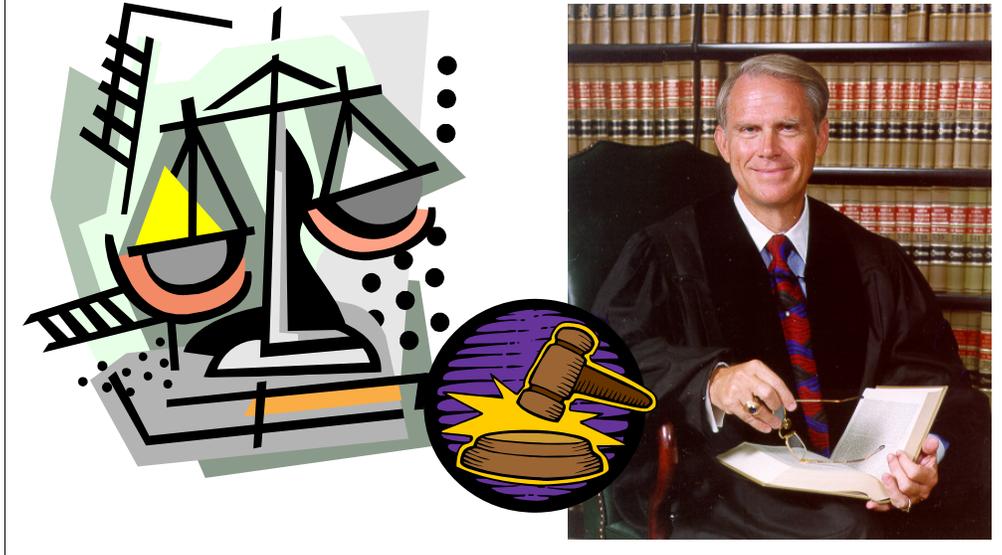
At the end of the slide Jeff will ask the Court if this is enough –

Jeff may object “OK for CA but not for Federal - or Florida - Courts”

Dan will continue with a short Daubert voir dire

Jeff will cross examine (not too rough please)

Decision Time



Text by Judge Marshall

{we hope Tim is qualified or can all go home now}

Direct Examination

Testimony for the Contractor

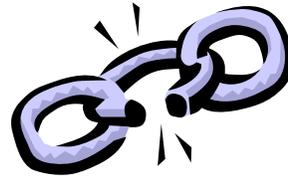


SHOWTIME

Dan takes the stage ...

Purpose of Direct Examination

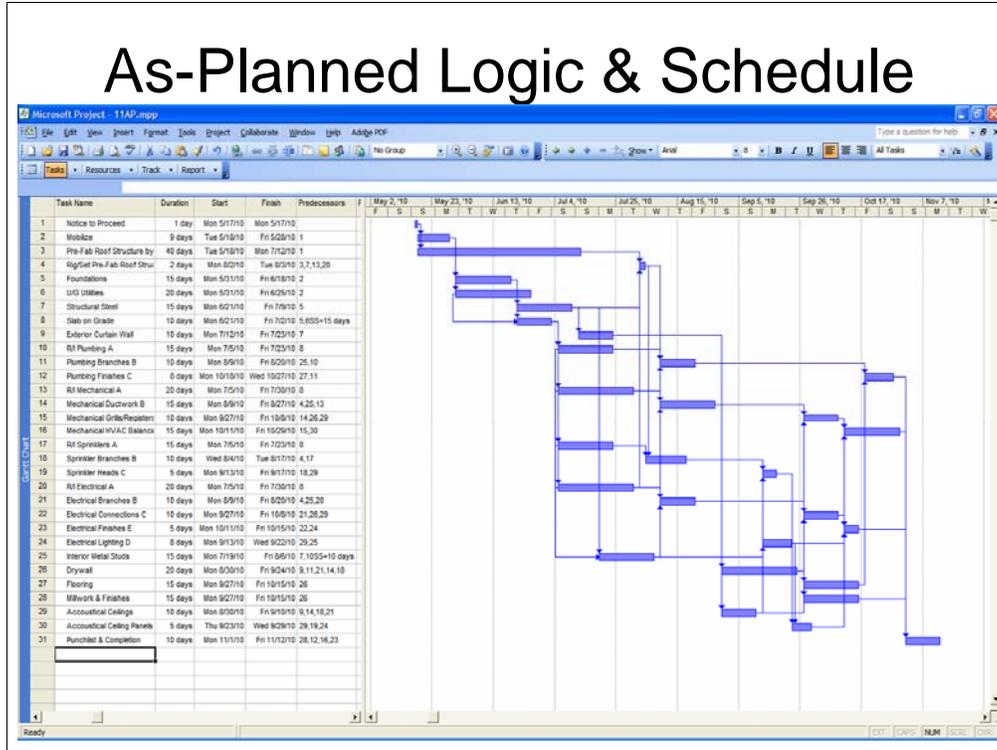
- Humanize witness -- stress credibility
- Weave expert's report into the "storyline"
- Simplify presentation of
 - assumptions
 - findings
 - analysis
 - opinions
- Defuse weak points



Text by Dan on how an attorney should conduct direct examination

Comment by Panel on demeanor of an Expert

As-Planned Logic & Schedule



Dan leads -

Tim will testify:

Proposal prepared using Microsoft Project, based upon interviews with Hasty Project Superintendent, Harry Hasty.

Elicit that Microsoft chosen as “best presentation software” in opinion of original project scheduler.

Note that this printed document has been “incorporated by reference” to the Dauphin-Hasty contract.

{The purpose of this slide and testimony is to set up for following slides

- 1) note a schedule provided for planning or promotion need not meet all requirements of a proper CPM schedule
- 2) illustrate strong points of Microsoft Project software
- 3) set up for further discussion on exactly what is meant by, and limitations of, “incorporation of schedule” to contract

As-Planned Logic & Schedule

Detail behind the Graphic

Notice to Proceed	1 day	5/17/2010 8:00	5/17/2010 17:00
Mobilize	9 days	5/18/2010 8:00	5/28/2010 17:00 1
Pre-Fab Roof Structure by Doozey Designs	40 days	5/18/2010 8:00	7/12/2010 17:00 1
Rig/Set Pre-Fab Roof Structure	2 days	8/2/2010 8:00	8/3/2010 17:00 3,7,13,20
Foundations	15 days	5/31/2010 8:00	6/18/2010 17:00 2
U/G Utilities	20 days	5/31/2010 8:00	6/25/2010 17:00 2
Structural Steel	15 days	6/21/2010 8:00	7/9/2010 17:00 5
Slab on Grade	10 days	6/21/2010 8:00	7/2/2010 17:00 5,6SS+15 days
Exterior Curtain Wall	10 days	7/12/2010 8:00	7/23/2010 17:00 7
R/I Plumbing A	15 days	7/5/2010 8:00	7/23/2010 17:00 8
Plumbing Branches B	10 days	8/9/2010 8:00	8/20/2010 17:00 25,10
Plumbing Finishes C	8 days	10/18/2010 8:00	10/27/2010 17:00 27,11
R/I Mechanical A	20 days	7/5/2010 8:00	7/30/2010 17:00 8
Mechanical Ductwork B	15 days	8/9/2010 8:00	8/27/2010 17:00 4,25,13
Mechanical Grills/Registers/Diffusers C	10 days	9/27/2010 8:00	10/8/2010 17:00 14,26,29
Mechanical HVAC Balancing D	15 days	10/11/2010 8:00	10/29/2010 17:00 15,30
R/I Sprinklers A	15 days	7/5/2010 8:00	7/23/2010 17:00 8
Sprinkler Branches B	10 days	8/4/2010 8:00	8/17/2010 17:00 4,17
Sprinkler Heads C	5 days	9/13/2010 8:00	9/17/2010 17:00 18,29
R/I Electrical A	20 days	7/5/2010 8:00	7/30/2010 17:00 8
Electrical Branches B	10 days	8/9/2010 8:00	8/20/2010 17:00 4,25,20
Electrical Connections C	10 days	9/27/2010 8:00	10/8/2010 17:00 21,26,29
Electrical Finishes E	5 days	10/11/2010 8:00	10/15/2010 17:00 22,24
Electrical Lighting D	8 days	9/13/2010 8:00	9/22/2010 17:00 29,25
Interior Metal Studs	15 days	7/19/2010 8:00	8/6/2010 17:00 7,10SS+10 days,13SS+10 days,17SS+10 days,20SS+10 days
Drywall	20 days	8/30/2010 8:00	9/24/2010 17:00 9,11,21,14,18
Flooring	15 days	9/27/2010 8:00	10/15/2010 17:00 26
Millwork & Finishes	15 days	9/27/2010 8:00	10/15/2010 17:00 26
Accoustical Ceilings	10 days	8/30/2010 8:00	9/10/2010 17:00 9,14,18,21
Accoustical Ceiling Panels	5 days	9/23/2010 8:00	9/29/2010 17:00 29,19,24
Punchlist & Completion	10 days	11/1/2010 8:00	11/12/2010 17:00 28,12,16,23

During execution of project, Hasty and its subcontractors used a mix of software to determine periodic status.

Post-contract completion, Hasty engaged EXPERT to prepare claim, using such contemporaneous records as available.

These included data from electronic files and paper printouts of these various softwares, and photos, meeting minutes, job diaries, etc.

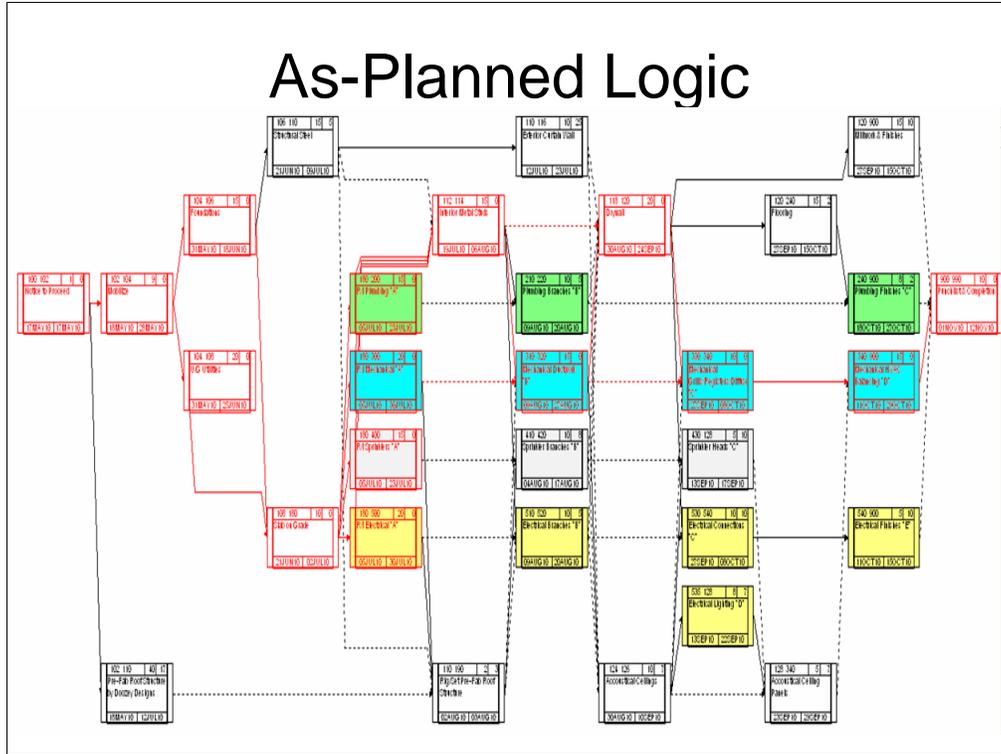
Tim chose to prepare claim in P3 “for ease of preparation and exchange of document with Dauphin experts”

SIDEBAR on issues if computer files sent by one party may not be readable, or may calculate differing reports than that by originator

EXPERT testifies the computer files of Microsoft Project, as displayed above, are importable to other software, including the P3 product chosen

{The purpose of this slide is to suggest that it is the DATA of the logic network that provides the basis for analysis and not merely the output of the software (especially where the software is a black box and no expert CAN truly describe what is going on inside. We also raise (softly) the issues of P6 “one-database” softwares that 1) allow bleed from project to project without warning or notice and 2) can not be duplicated on another machine (or licensed copy of the software)

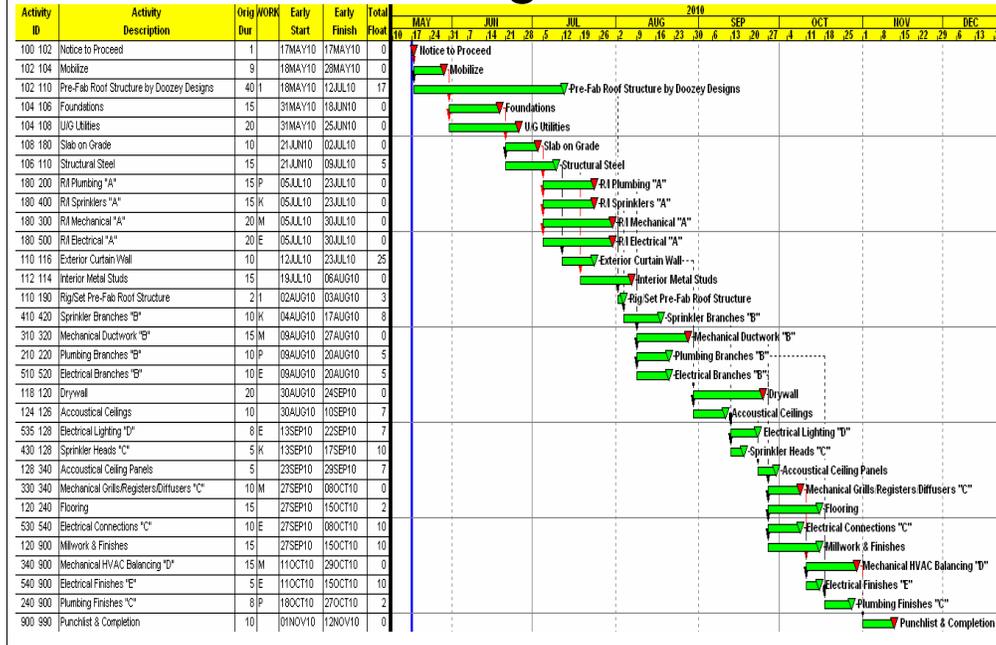
As-Planned Logic



Tim testifies the Microsoft Project file was successfully imported (or transferred) to the P3 product.

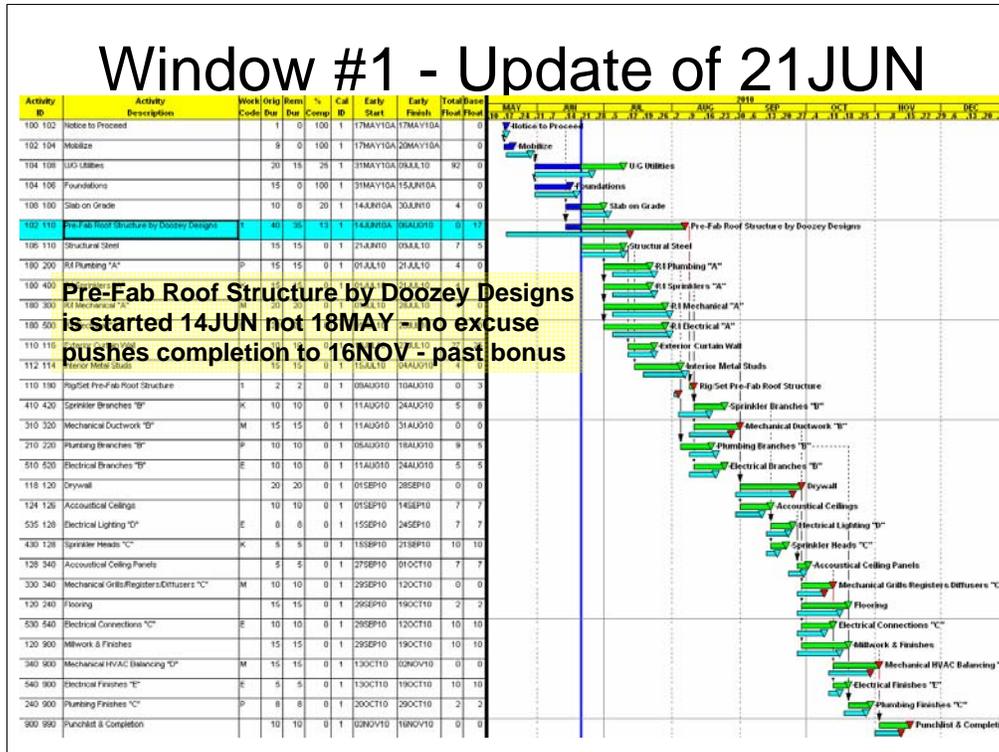
Dan submits Exhibit which may be compared with “Contract Document” Schedule

As-Planned Logic & Schedule



Tim indicates the “pure logic” of prior exhibit will then calculate an identical schedule as the Microsoft Project product and contract document

Window #1 - Update of 21JUN



Pre-Fab Roof Structure by Doozey Designs is started 14JUN not 18MAY - no excuse pushes completion to 16NOV - past bonus

Tim will explain use of a form of Windows Analysis, this by creating Updates at various dates, utilizing data from contemporaneous records.

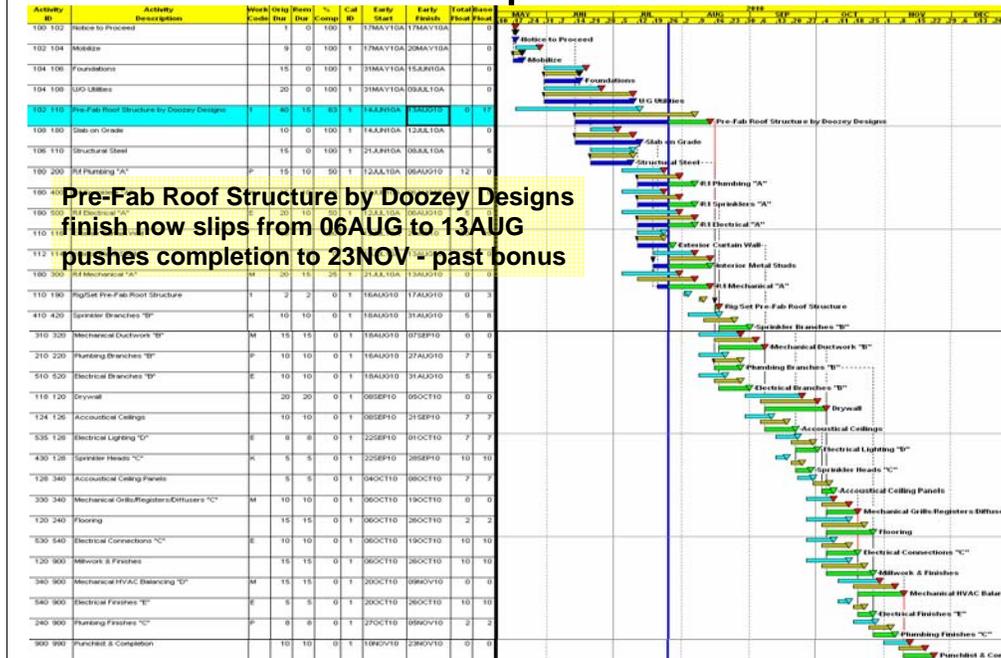
Choice of 21JUN is a project job meeting where Hasty complains that Dauphin's Doozey Design is causing a potential delay to completion by 15NOV

Tim will testify that records indicate that Doozey did not mobilize to work until 14JUN, claimed still needed full 40 days.

Impact of delay is to push completion of project back to 16NOV; all parties hope Hasty will be able to make up for lost time.

(Tim will not discuss that activity had 17 days float, thus only one day delay to project completion) << potential CROSS issue

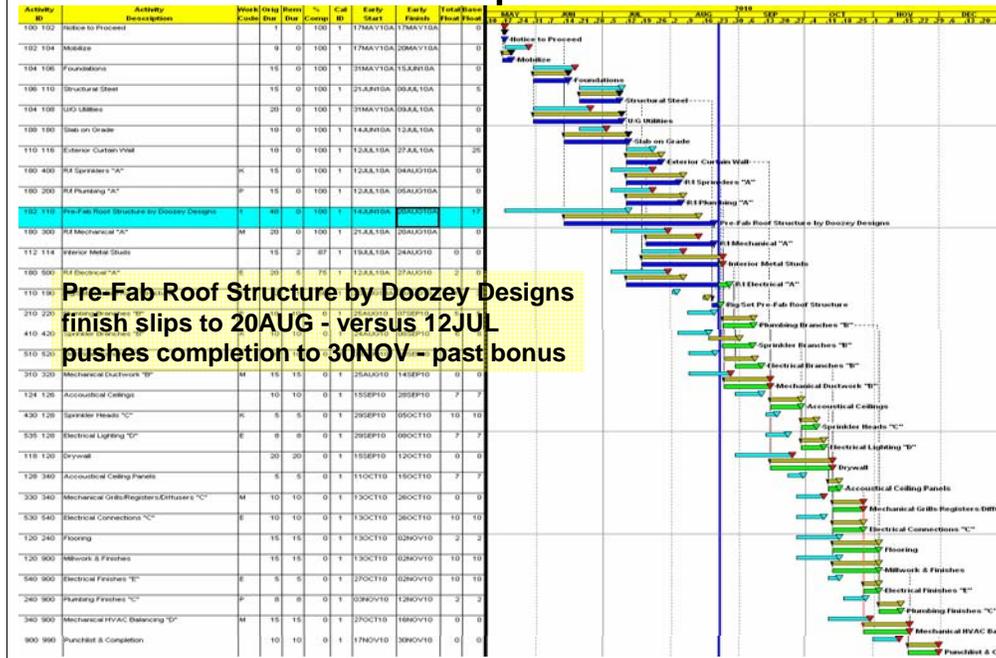
Window #2 - Update of 26JUL



Pre-Fab Roof Structure by Doozey Designs finish now slips from 06AUG to 13AUG pushes completion to 23NOV - past bonus

Tim will refer to another job meeting of 26JUL where the same complaint is made. Tim will testify that records substantiate that Doozey continues to slip. Impact of delay is to push completion of project back to 23NOV; all parties hope Hasty will be able to make up for lost time.

Window #3 - Update of 23AUG

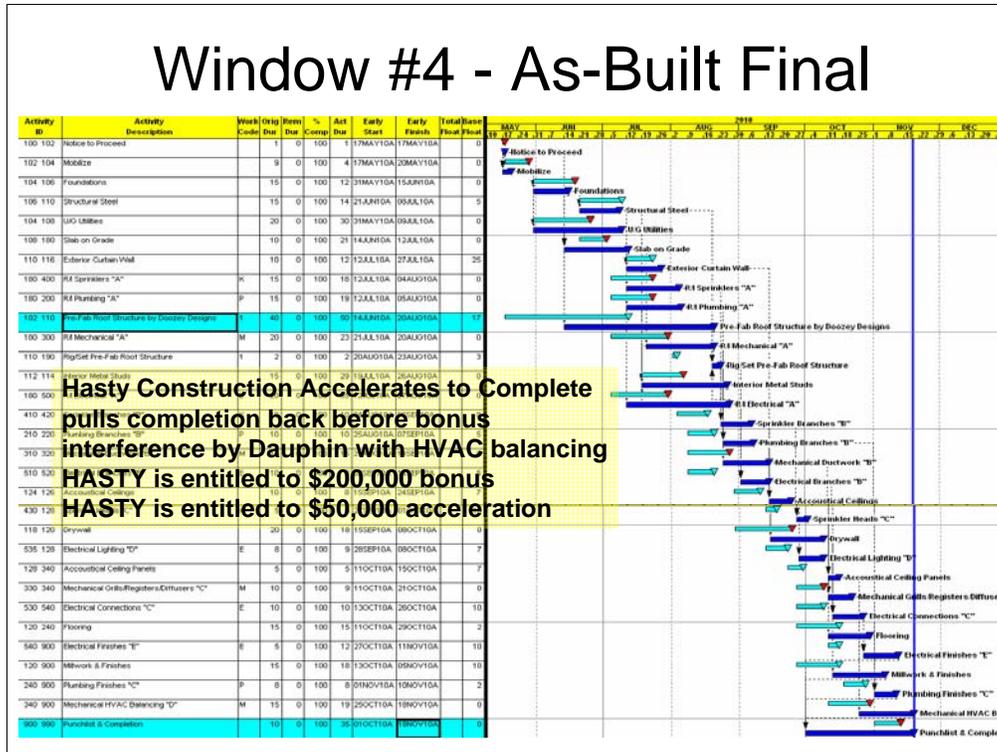


Tim will refer to another job meeting of 23AUG where the same complaint is made. (Other comments made at meeting, indicating Dauphin claims that Hasty's crews are taking longer than estimated, will not be noted by EXPERT) << CROSS issue

Tim will testify that records substantiate that Doozey continues to slip.

Impact of delay is to push completion of project back to 30NOV; all parties hope Hasty will be able to make up for lost time.

Window #4 - As-Built Final



Tim will testify project completed on 18NOV, despite “every effort” by Hasty to accelerate.

Tim will testify that Hasty “at great expense” overlapped its punchlist and cleanup activity with substantive work in order to make up the losses caused by Doozey.

Tim will testify to “interference by Dauphin” to HVAC balancing effort, delaying final completion at very end.

Tim will testify that Hasty entitled to full \$200,000 bonus, plus \$50,000 got partially wasted acceleration.

Bonus Date 11/15

	Contract Finish	Actual Finish	Days
Pre-Fab	7/12	8/20	+39
Roof Set	8/13	8/23	+20
Drywall	9/24	10/8	+15
Complete	11/12	11/18	+6

Tim provides summary of testimony

Cross-Examination



Jeff will lecture on issues he would bring up in Cross Examination had this been a real trial and we had time.

For example:

Tim did not discuss that the Doozey Design activity had 17 days float, thus only one day delay to project completion

{if we have TIME, perhaps Jeff can grill Tim on his issue to show how Expert can be punished for not showing “full and fair” presentation}



BREAK

Five Minute Only Please
(This course is accredited for 100 minutes)



Rebuttal

- Question ability to complete on-time
- Question validity of contractor expert's model
- Question contractor expert's algorithm
- Question contractor expert's conclusion

Fred (as Moderator):

Challenges for the defense team

Comments by Panel

Voir Dire of Christopher Carson, PSP, CCM, PMP



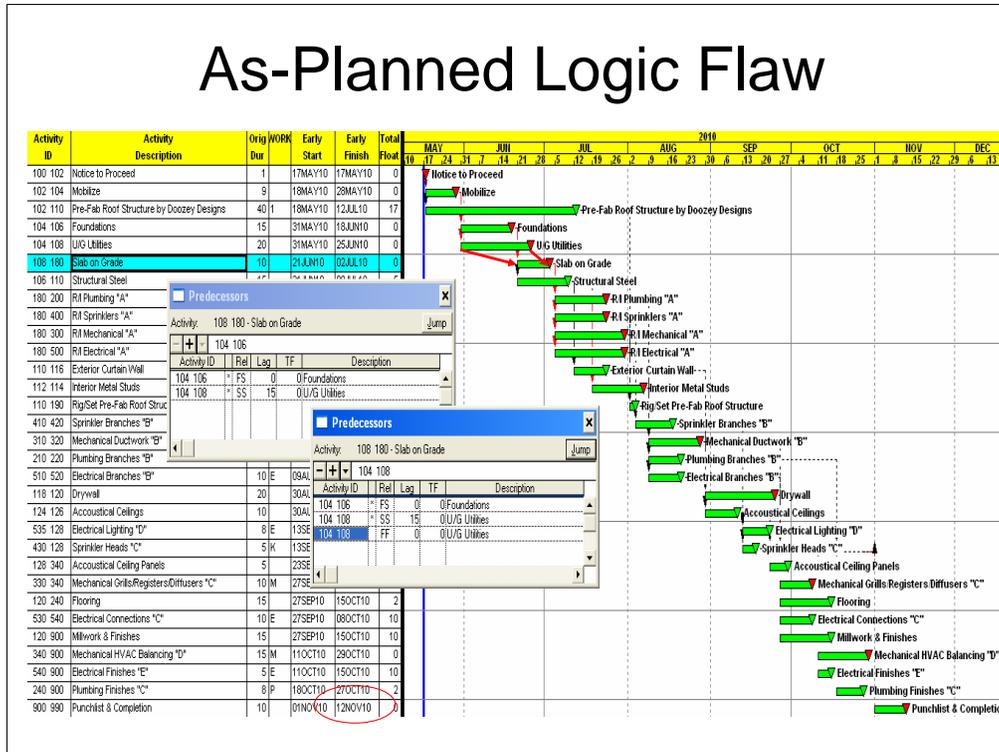
- Chris Carson is Corporate Director of Project Controls for Alpha Corporation, a professional engineering/construction firm providing engineering design and CM services, specializing in scheduling, schedule analysis, claims avoidance, dispute resolution, and cost estimating.
- He is a CMAA Certified Construction Manager (CCM), an ACEi Planning and Scheduling Professional (PSP), and a PMI Project Management Professional (PMP). Presenting at CMAA, ACE, DBIA, and PMI College of Scheduling conferences, Mr. Carson received a 2009 College of Scheduling award for "Significant Contributions to the Scheduling Industry", earned "Best Paper in the Scheduling Track" at the 2006 ACEi national conference, and received the "Chairman's Award" from CMAA in 2006.



Jeff will swear in Chris – and continue a brief voir dire (to showcase Chris)

Dan will lecture on how he might cross examine Chris for Voir Dire - but no time in today's presentation

As-Planned Logic Flow



Chris testifies the As-Planned logic of EXPERT has a major flaw.

While the P3 network is a precise import of the MSP network, the MSP network was not designed for purposes of delay analysis.

Chris testifies the underlying MSP network does not faithfully represent Harry Hasty's "plan of execution" because of limitations of MSP.

A limitation of MSP is that it can show only one restraint between two activities and therefore not show both a SS and FF restraint between the same activities.

"Viewing the relationship of U/G UTILITIES and SLAB ON GRADE, it appears clear that Harry Hasty expected to finish U/G UTILITIES before being able to pour and finish the SLAB ON GRADE" "I doubt anyone in this courtroom will suggest Harry contemplated tunneling under his newly poured slab to install these utilities."

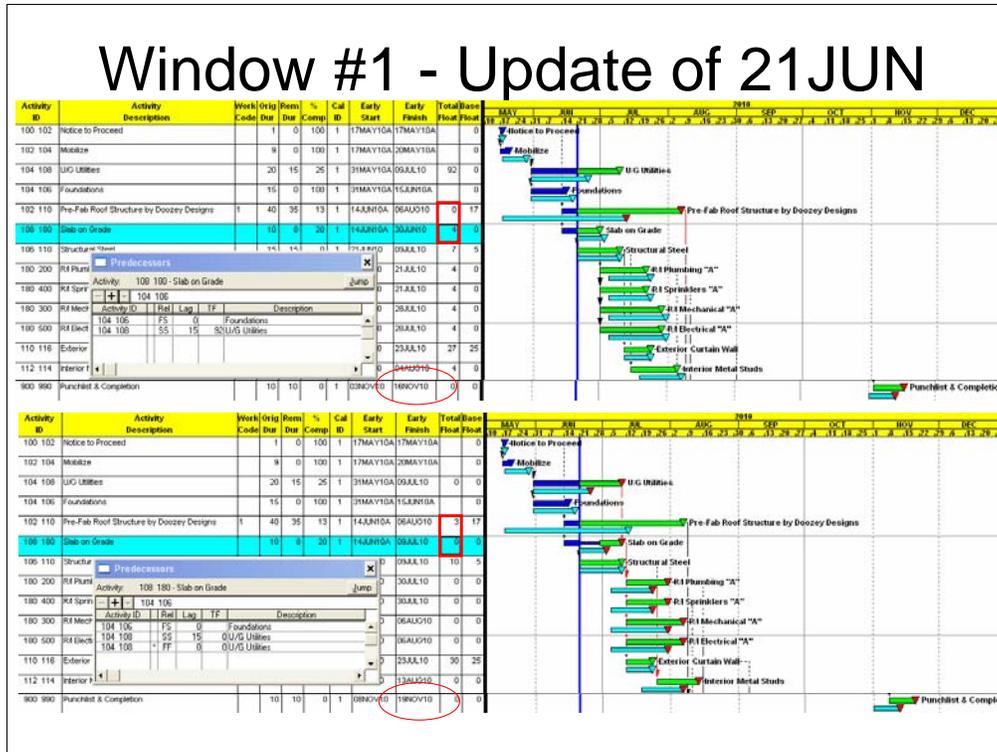
"While some lag between finish of U/G UTILITIES and SLAB ON GRADE may also be called for, in making the minimal changes to the analysis of EXPERT, only the restraint (without lag) has been added for our rebuttal analysis."

"As may be seen on the graphic, the SS restraint continues to be more important in this instance, and this correction creates no change to the initial baseline schedule calculated for the project."

{The purpose of this slide and testimony is twofold

- 1) to highlight that the scheduler may not record all the meaning and intent of the superintendent and
- 2) to highlight that the scheduler CANNOT with existing softwares record such meaning and intents (to varying degrees)
- 3) to highlight that many issues do not show up until one updates the CPM

Window #1 - Update of 21JUN



Chris testifies that the noted correction will have an impact when calculating UPDATE OF 21JUN.

Contractor's Window #1 indicates completion pushed to 16NOV by Doozey Design
 Chris's Window #1 indicates completion pushed to 19NOV by a late SLAB ON GRADE caused by slow progress on U/G UTILITIES

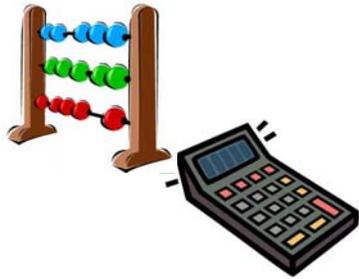
{Dan may ask jury if anyone really expects that Harry Hasty, or any super, expects to pour slab-on-grade and then tunnel under to finish u/g utilities

{Jeff may ask John to curb Dan's commentary or argument {emotion follows - then John intercedes

{Fred will reiterate: use of logic recorded to Microsoft Project - or to P3, P6, etc. by poorly trained scheduler - may create a false result when updated

Window #2 - Update of 26JUL

- Question the accuracy of input from Harry to MSP/P3
- Question the algorithm used to calculate the update

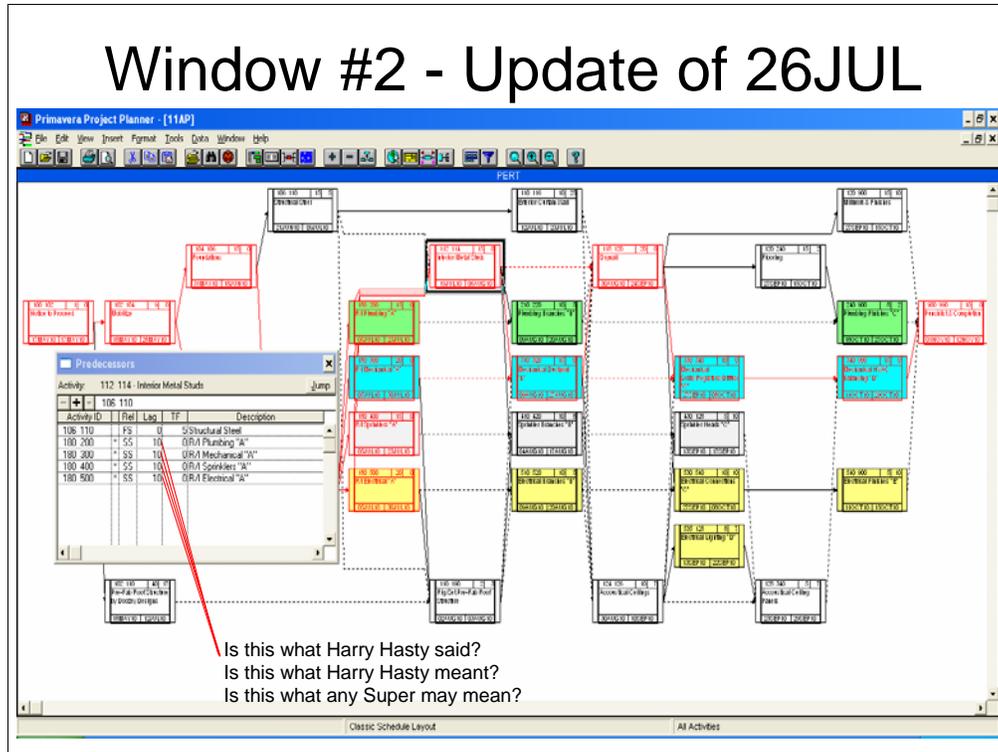


For Window #2 UPDATE OF 26 JUL, Chris will try to question both:
accuracy of input from Harry to MSP/P3, and
the algorithm used to calculate the update

{The purpose of this slide is twofold:

- 1) to highlight that intent of Harry Hasty and not simply what was recorded in proposal CPM (or even a working CPM) should rule
- 2) to highlight that the algorithms of software may not be known to superintendent (or even scheduler) and do not trump meaning and intent

Window #2 - Update of 26JUL



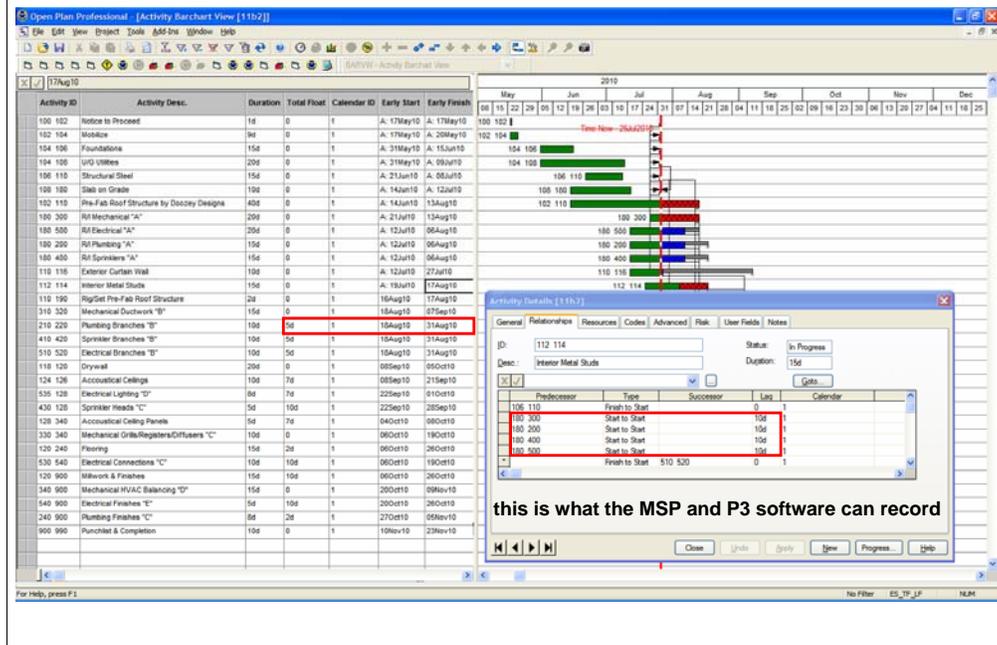
Chris testifies MSP/P3 logic networks indicate start of INTERIOR METAL STUDS require partial completion of various R/I activities (but not completion of such to finish)

Chris disagrees that is what was said or meant by Harry Hasty, and believes this too is an artifact of MSP limitations, but conservatively does not address this issue.

Chris disagrees that Harry Hasty said or meant "INTERIOR METAL STUDS may start 10 days after MECHANICAL R/I" and more likely said or meant "INTERIOR METAL STUDS may start when 10 days or 50% work on MECHANICAL R/I has been performed."

{The purpose of this slide and next two are to merely show off an example of how different software redefines what was said - THESE TWO SLIDES ARE NOT DIRECTLY REFUTING THE CONTRACTOR'S CASE (Had I had more time, perhaps I could have tweaked the facts to make this issue important here)

Window #2 - Update of 26JUL

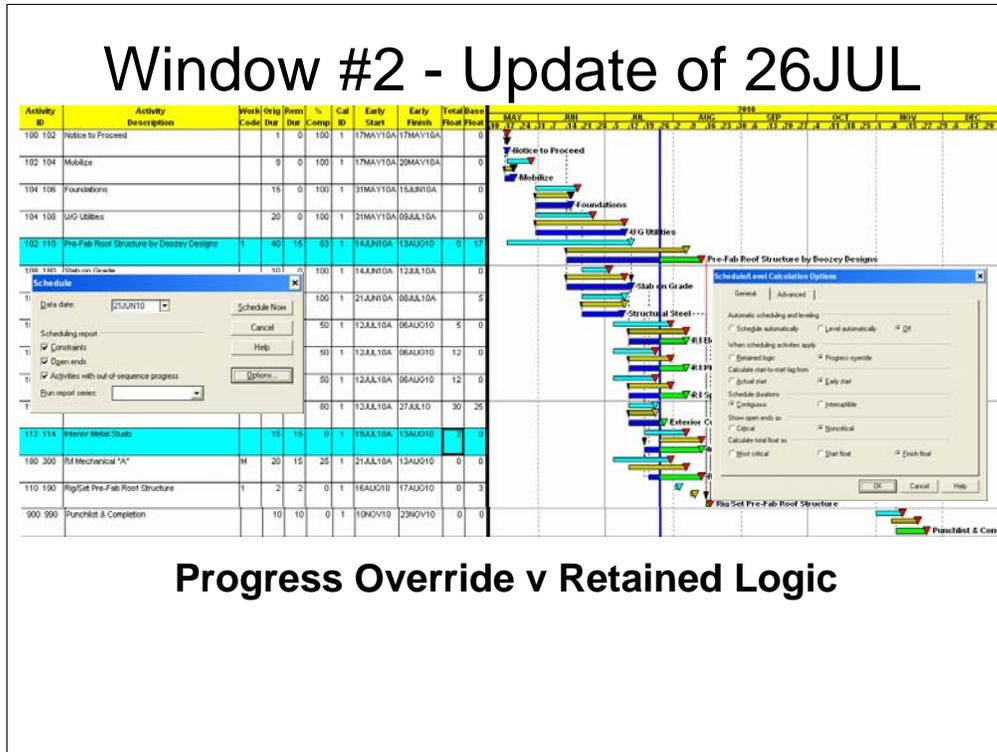


Chris testifies other software, such as Deltek Open Plan, can distinguish between saying:

“INTERIOR METAL STUDS may start 10 days after MECHANICAL R/I” and
 “INTERIOR METAL STUDS may start when 10 days or 50% work on MECHANICAL R/I has been performed.”

In this case noting that the use of the former calculates finish of STUDS on 17AUG and PLUMBING R/I to have 5 days float

Window #2 - Update of 26JUL



Progress Override v Retained Logic

Chris testifies that P3 has several “calculation modes which will yield differing results”

One choice of mode is that of Progress Override versus Retained Logic.

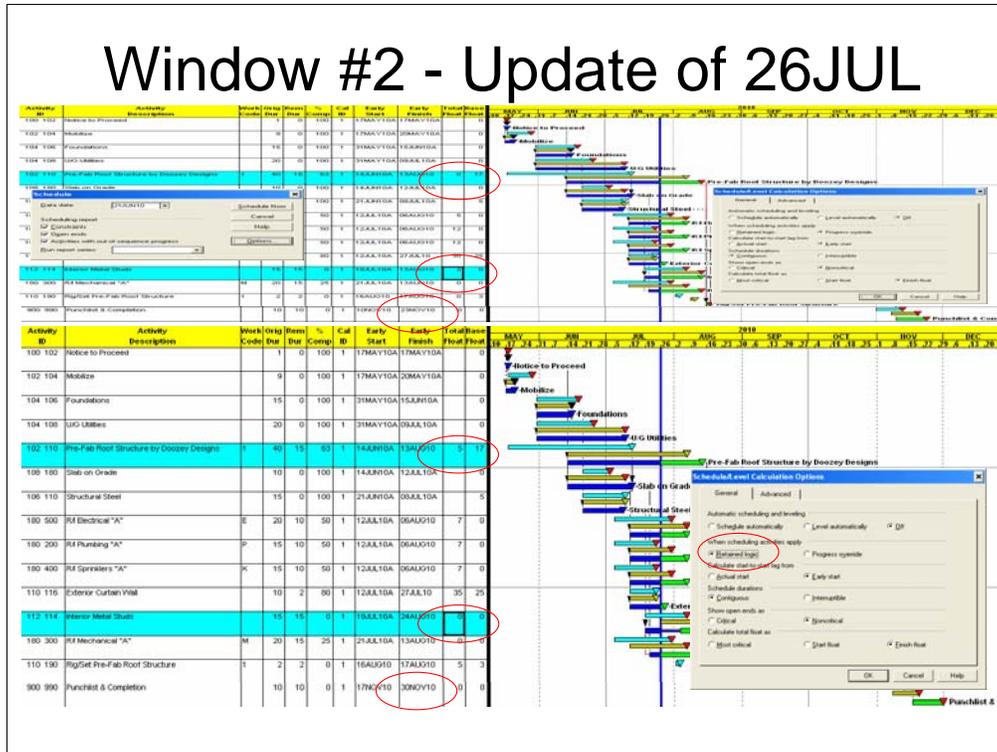
While Retained Logic is the default of P3, Contractor’s analysis for its presentation in this case used Progress Override.

And thus its Window #2 UPDATE OF 26JUL indicates the cause of delay to timely completion to be Doozey Design, while its work on INTERIOR METAL STUDS has two days float.

{The purpose of this slide is to show internal switches (which are not announced in printouts) of the same software may cause differing results.

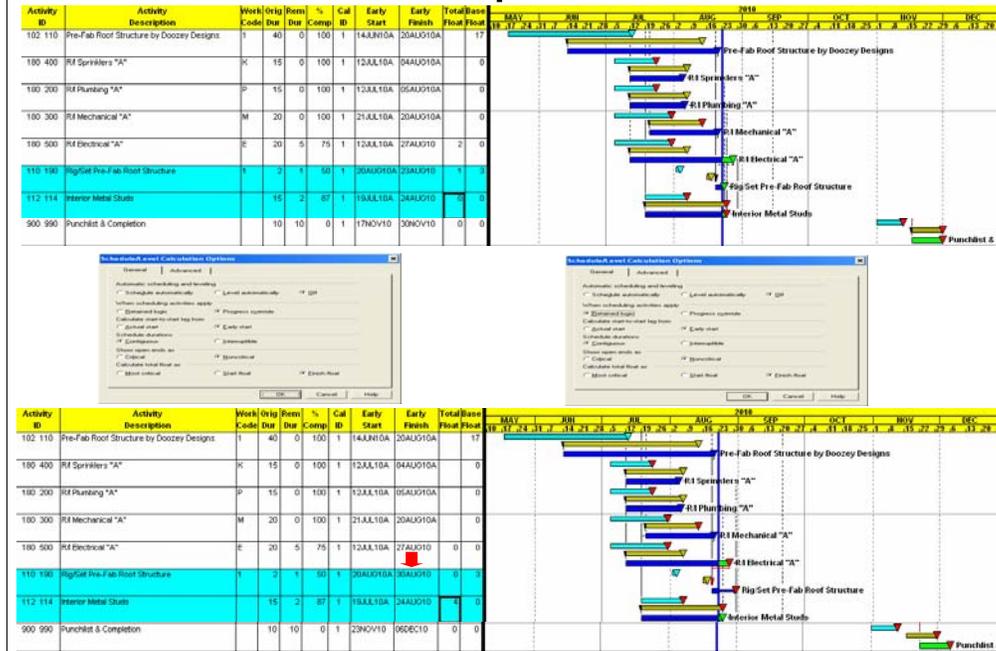
{for later discussion only, part of the problems with P6 style software are 100’s of such switches, that such may be set by other people using the same master database, that it is very difficult (or impossible) to get a listing of all settings, and such are not recorded in XER files and thus cannot be ported to another machine or license.

Window #2 - Update of 26JUL



Chris testifies that use of the default Retained Logic mode of calculation indicates a project pushed back not to 23NOV but to 30NOV, and that the cause is slow progress on INTERIOR METAL STUDS, while work by Doozey Design has five days float.

Window #3 - Update of 23AUG



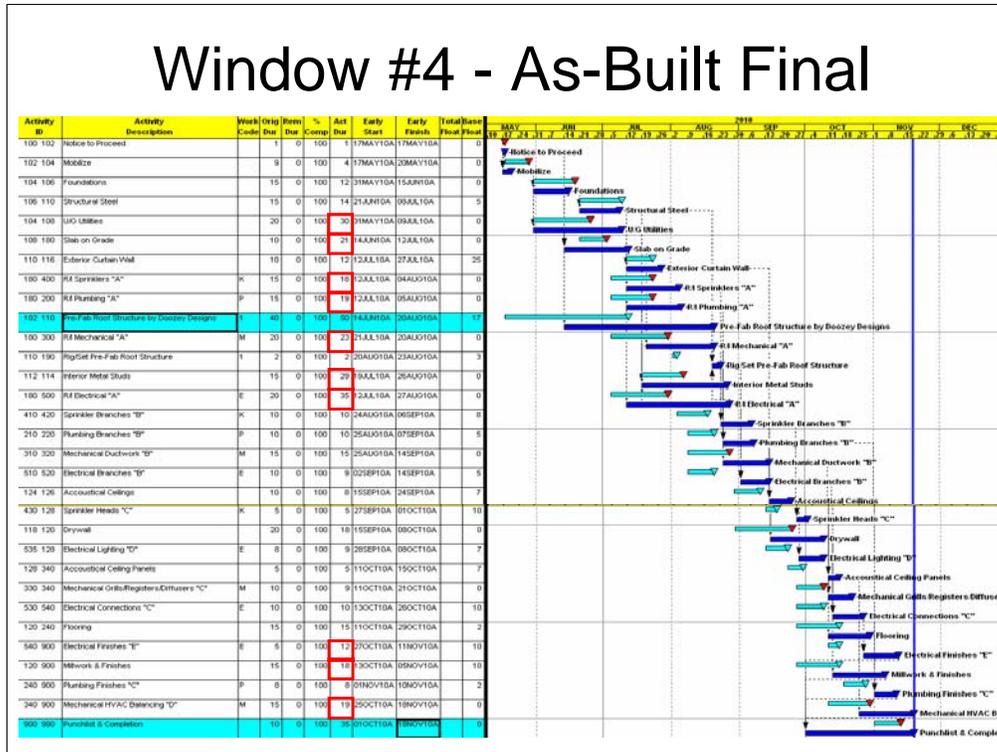
Chris testifies choice of Retained Logic or Progress Override is not a clear decision, and perhaps should be selectable on a restraint-by-restraint basis in “dream software”

For Window #3 UPDATE OF 23AUG, use of Retained Logic would improperly calculate delay to RIG/SET PRE-FAB ROOF STRUCTURE by the incomplete R/I ELECTRICAL “A” even though it is clear to any Expert that once the roof is in process of being rigged, it will continue through to completion (even though “out-of-sequence”) and remaining electrical rough-in work will be performed after the roof is on.

{The purpose of this slide is to build credibility of the expert and not to defuse contractor’s case. To the question “well shouldn’t the contractor always use retained logic?”, the answer is “such depends on the intent of THIS SPECIFIC restraint that has been violated with work performed “out-of-sequence”

In the situation of this slide (update) retained logic makes sense - if the roof lift is performed out-of-sequence, we complete it and not let the roof hang in the air for several weeks. NOTE that no commercial software allows this decision on a restraint by restraint basis

Window #4 - As-Built Final



Chris testifies that Contractor's failure to achieve timely completion by the agreed deadline is due to repeated failure to achieve timely completion of activities during the course of the project.

Chris testifies Dozey Design took 50 days rather than 40, but had 17 days float, and did have its roof ready for lift when Hasty was ready.

Chris testifies that Contractor provides no substantiation that Dauphin "interfered with HVAC balancing," comments that "having one room at 90 degrees and another at 50 degrees is not balanced nor acceptable," suggests Hasty did not include enough time for this activity in its initial schedule, and that the "contingency" provided by its PUNCHLIST activity was indeed needed for this task.

{If contractor's case was a bit thin at the end - this is a nice "Hail Mary"

	1	2	3	4	Delay		
BL							
UD1					3CD		
UD2						15CD	
UD3							19CD
UD4						3CD	
SUMMARY OF DELAY							

Chris provides summary of testimony

Cross-Examination



Dan shows off cross examination technique

Re-Direct Examination



Jeff explains Chris was coached not to argue with Dan

Will give one example of rehabilitation

Jeff and Dan will note many attorneys may fail here leaving expert perhaps looking foolish

John will note the expert being left looking foolish is not the expert's fault in such a situation

Fred may note desire (not always possible) for expert to educate attorney in advance for typical dangerous cross questions

Closing Arguments

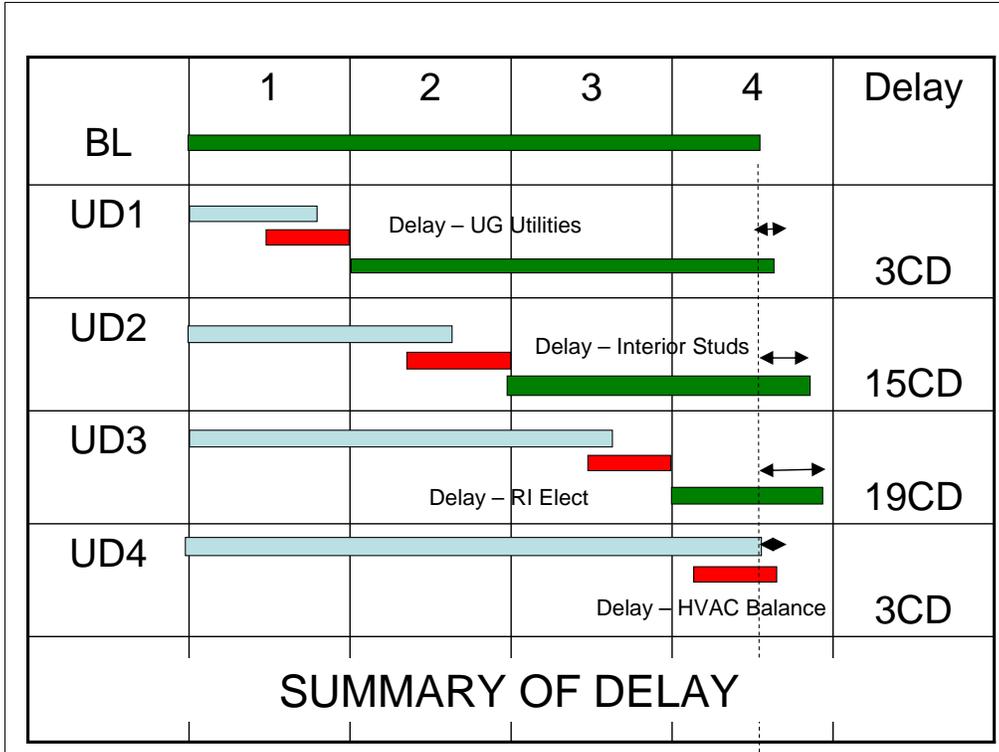


Three minutes each please

Bonus Date 11/15

	Contract Finish	Actual Finish	Days
Pre-Fab	7/12	8/20	+39
Roof Set	8/13	8/23	+20
Drywall	9/24	10/8	+15
Complete	11/12	11/18	+6

Graphic for Dan's Closing on behalf of the Contractor



Graphic for Jeff's closing on behalf of the Owner



John will have lots of fun

Questions?

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Fred as Moderator