List of attendees:

\* AlexShkotin

\* AmandaVizedom

\* AnatolyLevenchuk

\* BethDigiulian

\* BobbinTeegarden

\* JimDisbrow

\* Joel Sachs

\* JoelBender

\* KenBaclawski

\* Kevin Hannon

\* KevinTyson

\* LaVernPritchard

\* LamarHenderson

\* Liliana Ibeth Barbosa Santillan

\* MatthewWest

\* MikeBennett

\* NancyWiegand

\* PeterYim

\* Ravi

\* Richard Martin

\* Shaw Feng

\* SteveRay

\* TaraAthan

\* ToddSchneider

\* Uri Shani

\* bill mccarthy

\* michaelRiben

\* nigel

 Lightly edited chat transcript:

[17:25] MikeBennett: Tips for speaking / asking questions etc.:

[17:25] MikeBennett: To un-mute, press "\*7" ... To mute, press "\*6" (please mute your phone, especially if you are in a noisy surrounding, or if you are introducing noise, echoes, etc. into the conference line.)

During the Q&A / discussion segment (when everyone is muted), If you want to speak or have questions or remarks to make, please raise your hand (virtually) by clicking on the "hand button" (lower right) on the chat session page. You may speak when acknowledged by the session moderator (again, press "\*7" on your phone to un-mute).

Test your voice and introduce yourself first before proceeding with your remarks, please.

Please remember to click on the "hand button" again (to lower your hand) and press "\*6" on your phone to mute yourself after you are done speaking.

[17:30] MikeBennett: From Third Normal Form to a Web-enabled World

Dr West will present on the changes to the way data has been structured to meet the changing needs of databases over the last 30 years and looking forward to the needs of web enabled data, including the move from realtional databases to triple stores.

[17:34] MikeBennett: == Session Starts ==

[17:36] MikeBennett: Note: there is no screen sharing, so please click on the "slides" link in the session page.

[17:36] MikeBennett: http://ontolog-02.cim3.net/wiki/ConferenceCall\_2015\_10\_22

[17:37] PeterYim: slides are at: http://ontolog.cim3.net/file/resource/presentation/MatthewWest\_20151022/From-3NF-to-W3C.pdf

[17:48] PeterYim: (better, persistent) link to the slides: http://ontolog.cim3.net/file/resource/presentation/MatthewWest\_20151022/From-3NF-to-W3C--MatthewWest\_2015-09-22.pdf

[17:48] MikeBennett: So is 6NF the same as bitemporality?

[17:56] MikeBennett: MatthewWest mentions an important point: when you are talking about a record and when you are talking about an object the record is about

[17:57] PeterYim: == Q & A

[17:59] MikeBennett: Please can you also summarize questions in here. Thanks

[18:00] MikeBennett: MatthewWest recommends using very high levels of normalization, to address the issues summarized here.

[18:01] SteveRay: My question was, what kinds of design guidance would you give to a new modeler today?

[18:01] ToddSchneider: What does 'normalization' mean for ontology development?

[18:04] AmandaVizedom: There are also ontology-native senses of normalization, e.g., logically, to CNF or DNF, and ontological, related to implicit entities, relationships, context...

[18:07] MikeBennett: Observation: ontologies don't always say enough about the context.

[18:08] BethDigiulian: Can you explain where the sub-attributes such as weight, height and marital status on slide 7 end up in your 7NF slide 11.

[18:08] ToddSchneider: CNF? DNF?

[18:08] TaraAthan: CNF = conjunctive normal form

[18:09] BethDigiulian: and what is the difference between record\_created and record\_copy\_created

[18:10] MatthewWest: @Beth: The record created relates to the original copy, whereas record copy created relates to this copy of the record in this database. There may be a difference.

[18:11] ToddSchneider: How would a 'logical' normal form help uncover semantic conflicts or duplication?

[18:12] MikeBennett: Normalization is aimed at helping you find a better way to structure the data model but doesn't guarantee it.

[18:15] AmandaVizedom: @Todd [13:11] Logical normalization is very important whenever (1) the representation language is expressive enough that there is more than one way to represent something, and (2) inference at any given point is partial, that is, you are not continually computing full entailments (as you can't be, in very expressive languages, and usually can't, even in less expressive ones).

[18:17] TaraAthan: Regarding slide 7, I see a difference between properties like height and weight, which is always changing, and marital status, which is constant until an event happens to change it. How do/should fluents enter into data models?

[18:20] BethDigiulian: Great remark!

[18:20] ToddSchneider: Amanda, I agree but there seems to be an assumption that either there's a logical equivalence of the representations, an additional representation that would 'detect' an overlap, or a human or other 'external' entity that understands the intended interpretations of the symbols and thus able to detect the conflict or duplication.

[18:22] MikeBennett: On Slide 7, also one state is a part of another (not shown). Each state has start and end date and need not be contiguous with others.

[18:23] AmandaVizedom: @Tara [13:17] This is quite important, I think. For some applications, it's very useful to represent a sort of decay or uncertainty model for different kinds of assertions. Assuming that your data refreshes at a lower frequency than the time period in which might change, you can represent, e.g., whether and how the last-known value should be inferred to still hold, depending on time elapsed.

[18:25] AmandaVizedom: @Todd [13:20] - I'm thinking of systems (knowledge-base, ontology management, or application) that perform normalization under the hood, including at assert time. External would seem to defeat the purpose.

[18:27] JimDisbrow: Some of the characteristics are reflexive while others are not (e.g., one is married to another person - so the characteristic is not essentially reflexive - while one's weight is always reflexive). Does OWL or the ISO support reflexivity yet?

[18:29] MatthewWest: Yes, again, marital status is a simplification, where the underlying context is that one person is married to another. The marital status is derived from this underlying state.

[18:33] TaraAthan: Actually, there are multiple notions of subclass - e.g. intensional and extensional.

[18:35] AmandaVizedom: +1 Matthew's point: careful modeling is just as important for ontological models as for RDBs.

[18:36] ToddSchneider: Matthew, Mike, Thank you for an informative and useful presentation. Have to go. Cheers.

[18:41] AmandaVizedom: @Tara [13:33] Yes, indeed. I meant to say that any language that is specifically built for ontological representation, as far as I can recall, has such a notion defined as a primitive of the language, not subject to user (re-)interpretation. Some such languages, of course, have more than one.

[18:43] nigel: thanks guys - gotta go

[18:44] JimDisbrow: Yes, thanks again. Bye.

[18:44] SteveRay: Thanks. Bye.

[18:44] JoelBender: Thank you!

[18:45] PeterYim: thanks, Matthew & Mike ... great session!

[18:45] AnatolyLevenchuk: Thanks!

[18:45] MikeBennett: === Session ends ===