

Integration of Online Resources: *WISDOM* as a *REDCap* front-end for T1 Studies on *CTSPedia*



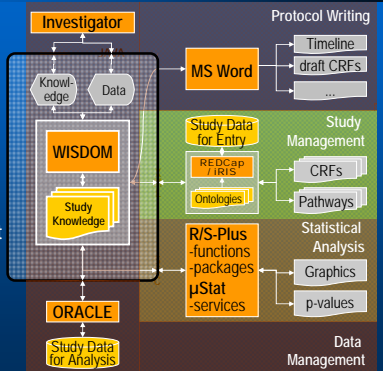
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WISDOM for Research Support

Goal:

to make knowledge about the design of the study available to the software an investigator uses for

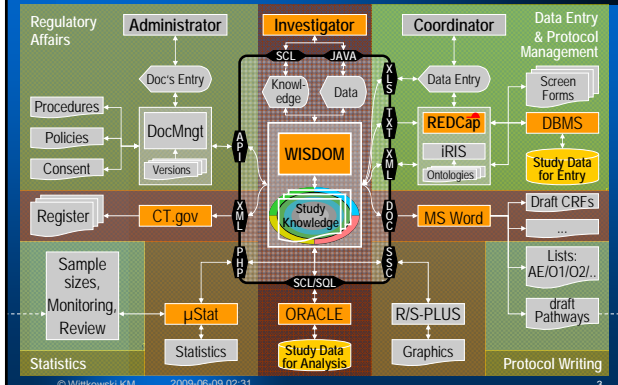
- Protocol Writing
- Study Management
- Data Management
- Statistical Analysis
- Data Sharing



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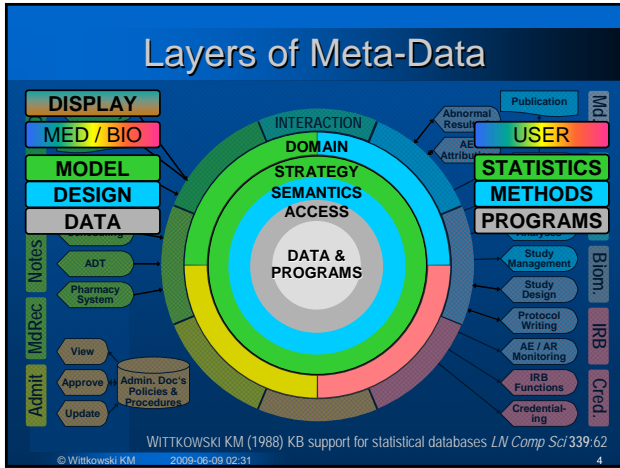
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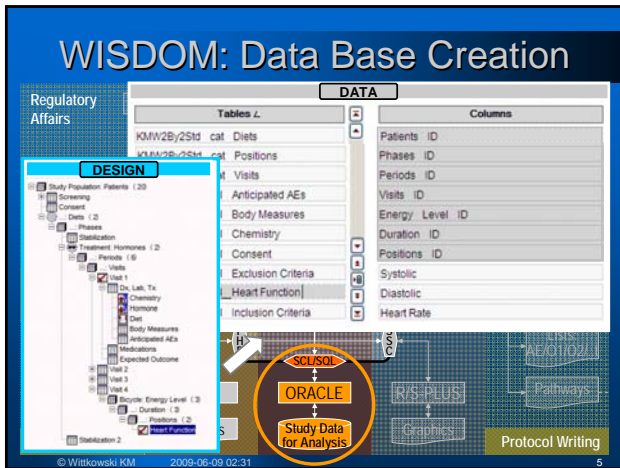
WISDOM as a Knowledge Broker

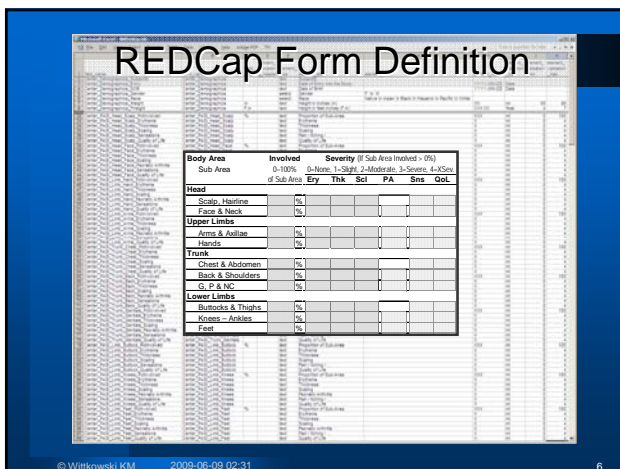


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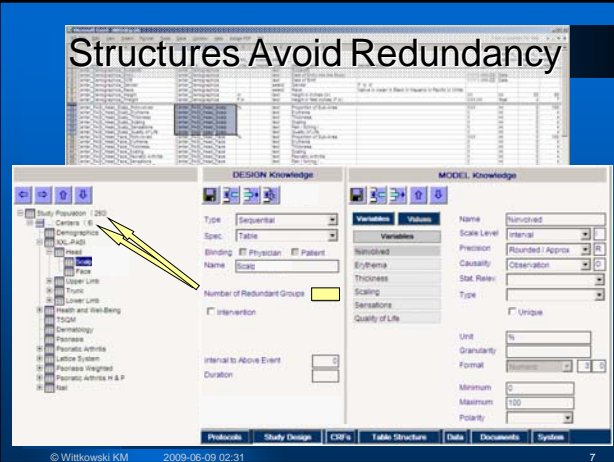
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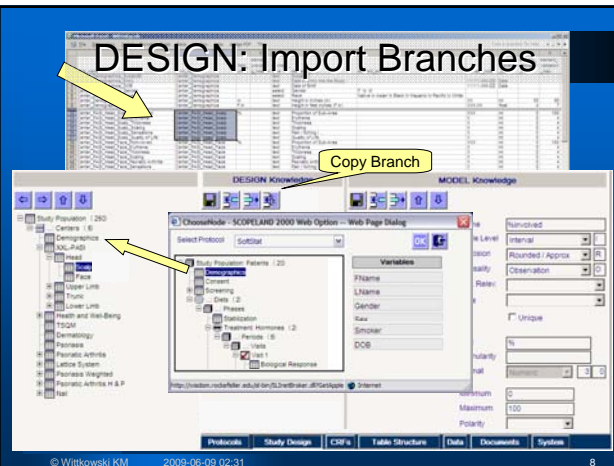
Structures Avoid Redundancy



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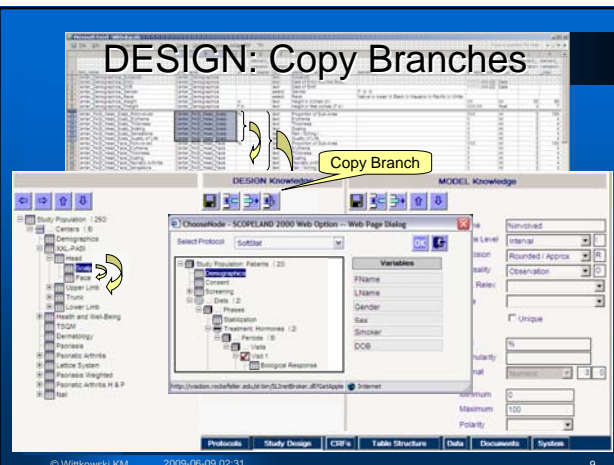
DESIGN: Import Branches



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DESIGN: Copy Branches



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Rich MODEL Knowledge

The screenshot shows a software interface for data management. On the left is a tree view showing a study structure with categories like 'Study Population', 'Centers', 'Demographics', and 'Face'. The right side is divided into two main panels: 'DESIGN Knowledge' and 'MODEL Knowledge'. The 'MODEL Knowledge' panel has a 'Variables' section with a table showing variable names and their types, and a 'Values' section with dropdown menus and input fields for defining variable values.

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Flexible DISPLAY Knowledge

This screenshot shows the 'DISPLAY Knowledge' window, which is a table that allows users to configure how data is displayed. The table has columns for 'Variable', 'Unit', 'Min', 'Max', 'Description', and 'Flags'. The variables listed include 'Nonvolved', 'Erythema', 'Thickness', 'Scaling', 'Sensations', and 'Quality of Life'. There are also checkboxes and dropdown menus for each row, likely to control the display format or visibility of each variable.

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WISDOM for REDCap

The screenshot displays the 'WISDOM for REDCap' interface. It is designed for editing and managing subject data. The 'Pasi Head' section allows editing the subject ID and name. The 'Demographics' section contains fields for 'Date of Entry into the Study', 'Date of Birth', 'Gender', 'Race', 'Height', and 'Current weight'. The 'General Information' section on the right provides a list of data elements that can be added to the study, such as 'Demographics', 'Face Head', 'Face Neck', 'Face Face', 'Face Limbs', and various 'Health' related items.

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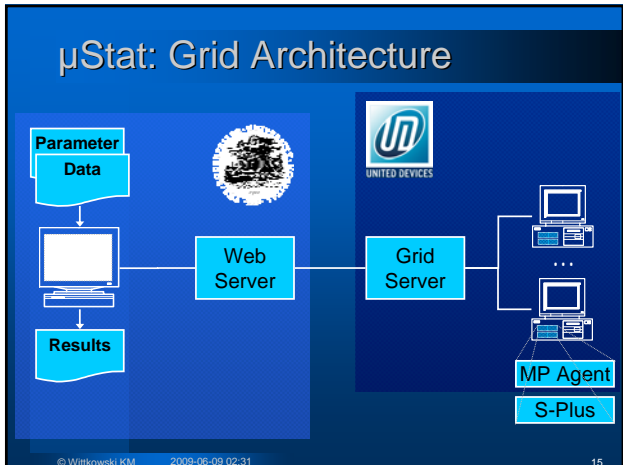
WISDOM for Complex Designs/Genotypes

The screenshot displays two overlapping windows. The top window is titled "DESIGN Knowledge" and shows a hierarchical tree on the left with categories like "Study Population: Patients (20)", "Concomitant Medication", "Intervention", and "Problems". On the right, there are control panels for "Variables" and "Values" with dropdown menus and checkboxes. The bottom window is titled "MODEL Knowledge" and shows a similar interface with a tree on the left and control panels on the right. The bottom-left corner of the image contains the text "© Wittkowski KM 2009-06-09 02:31" and the number "13".

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WISDOM for Complex Phenotypes / μ Stat

The screenshot shows a data table at the top with columns for various phenotypes such as "Blk Back", "BL", "DLN", "JDLN", "WDLN", "BMT-DLN", "EAR", "SKEL", "THUMB", "REARSE", "MARK", "EYE", "MFCB", "Sknr", and "HEIGHT". Below the table is a "DESIGN" panel with a tree view on the left and a "Phenotype" network diagram on the right. The network diagram consists of interconnected nodes representing different biological or clinical entities. The bottom-left corner of the image contains the text "© Wittkowski KM 2009-06-09 02:31" and the number "14".



CTSPEDIA

RESEARCH TOPICS ARTICLES STATISTICAL TOOLS ASK THE EXPERTS LINKS & RESOURCES ABOUT US

CTSpedia » CTSpedia Web » StatisticalTools » WebServices (08 Jun 2009, CTSpediaAdmin)

Web Services for Tasks Associated with Statistical Analyses

These web services are resources that go beyond statistical calculators, but do not require computational skills.

WISDOM

WISDOM (Web-based Interactive Study Design, Organization, and Management)
Knut M. Wittkowski, The Rockefeller University, [Email](#)
References: [Roadmap](#), [Integration](#), [Progress](#)
WISDOM provides a GUI and a layered study meta data ontology for:

- entering study meta data allowing for portions of existing studies to be imported.
- automatically creating an Oracle data base
- exporting CDF definitions into REDCap: [Research Electronic Data Capturing](#)
- importing data from various sources into the secure Oracle data base (in progress)
- assisting analyses with μ Stat, R, SAS... (in progress)
- setting up interim analyses to report study progress and emerging risks (planned)
- automatically producing analyses for primary objectives (planned)
- conducting bootstrapped power calculations (planned)
- facilitating data sharing by adding study design information (in progress)

μ Stat Web server for analyzing multivariate ordinal data

μ Stat Web server for analyzing multivariate ordinal data (grid powered, [multijevs RSS feed](#), [discuss](#))
Knut M. Wittkowski, The Rockefeller University, [email@rockefeller.edu](#)
maintained by: [Tingting Song](#), [tsong@rockefeller.edu](#)
(based on [muStat package for multivariate ordinal data](#), see [R Packages](#))

- screening microarrays for gene expression profiles (sets of collaborating genes)
- screening whole genome scans for epistasis between multipoint ranges (diplotypes)

CTSpedia

- Log In or Register
- Create New Topic
- Report a Problem

Special Resources

- CTSpedia
- Forum
- Main
- OntologyMapper
- ResearchEthics
- Sandbox
- Tools

Contributors

- Notifications
- Recent Changes
- Help
- Email Us
- Maintenance

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WISDOM for Data Sharing

“To ensure that others can use” data, **meta-data** is needed that documents

- “definitions of variables, details about codes
- the methodology and procedures used to collect the data,
- variable field locations, [...]”

The precise content of only the DOMAIN documentation will vary by the

- scientific area,
- type of data collected,
- study design, and
- characteristics of the dataset.”

http://grants.nih.gov/grants/policy/data_sharing/data_sharing_guidance.htm

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MODEL DESIGN DATA DOMAIN MODEL DESIGN DATA

Plans to Meet Challenges

Develop

- Best Practices and Resources

to assist clinical and translational scientists with

- Experimental Design
- Protocol Writing
- Data Management (Oracle)
- Data Acquisition (REDCap)
- Safety Monitoring
- Statistical Analyses (μ Stat)
- Data Sharing

Using the CTSA environment to

- Develop an ontology and
- Build and share tools (*muStat*, *WISDOM*)

Based on novel non-parametric approaches (u-statistics) and on biostatistical knowledge at the layers

MODEL DESIGN DATA

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