[redacted]

Meta-Reviews For Paper

Track [redacted]

Paper ID [redacted]

Title [redacted]

Masked Meta-Reviewer ID: Meta_Reviewer_1

Meta-Reviews:

Question	
Overall Rating	Reject
Summary Comments	Dear Authors, Thank you for your submission to [redacted]. We have now received the reviews for your manuscript from the Review Board. While they appreciate your research efforts, substantive concerns have been raised about its positioning wrt related work, in particular [5] (with which an experimental comparison would have been welcome) as well as the works: X. Chai, B.-Q. Vuong, A. Doan, and J. F. Naughton. Efficiently incorporating user feedback into information extraction and integration programs. SIGMOD 09 P. P. Talukdar, M. Jacob, M. S. Mehmood, K. Crammer, Z. G. Ives, F. Pereira, and S. Guha. Learning to create data-integrating queries. PVLDB 08 Corleone: Hands-off Crowdsourcing for Entity Matching, C. Gokhale, S. Das, A. Doan, J. Naughton, N. Rampalli, J. Shavlik, J. Zhu. SIGMOD-14. Other concerns were raised on the treatment of erroneous feedback, and evaluation in a real-life setting, e.g. AMT (R1) and the approach which consists of showing users the data sources' schemas (R2). Therefore, we are unfortunately unable to consider the paper for publication in [redacted]. Notwithstanding, we encourage you to continue your interesting line of work, and hope that the reviews will aid you in publishing an improved version of the manuscript at an alternative forum. Regards, Associate Editor

[redacted]

Reviews For Paper

Track [redacted]

Paper ID [redacted]

Title [redacted]

Masked Reviewer ID: Assigned_Reviewer_1

Review:

Question	
Overall Rating	Weak Reject
Summary of the paper (what is being proposed and in what context) and a brief justification of your overall recommendation. One paragraph	This paper proposes a mechanism of leveraging user feedbacks for improving the quality of the mediated schema. The proposed approach is sound, but the support for incorrect feedback seems to be too simplistic and its evaluation is also limited.
Three (or more) strong points about the paper (Please be precise and explicit; clearly explain the value and nature of the contribution).	S1: User feedbacks are leveraged for pay-as-you-go integration. S2: Users do not need to know about the mediated schema S3: Evaluation results validate the effectiveness.
Three (or more) weak points about the paper (Please indicate clearly whether the paper has any mistakes, missing related work, or results that cannot be considered a contribution; write it so that the authors can understand what are seen as	W1: Incorrect feedbacks are treated in rather ad-hoc ways. W2: User modeling of 10 or 20% of random errors is not justified. W3: For real-life deployment, techniques measuring the expected precision or knowing when to stop training seems to be useful, and also their evaluations on real user feedbacks (e.g., AMT)

negative aspect	
Relevant for PVLDB	YES
Novelty (Please give a high novelty ranking to papers on new topics, opening new fields, or proposing truly new ideas; assign medium ratings for delta papers and papers on well known topics but still with some valuable contribution).	Novel
Significance	Improvement over existing work
Technical Depth and Quality of Content	Solid work
Experiments	OK, but certain claims are not covered by the experiments
Presentation	Excellent: careful, logical, elegant, easy to understand
Detailed Evaluation (Contribution, Pros/Cons, Errors); please number each point	This paper proposes a mechanism of leveraging user feedbacks for improving the quality of the mediated schema. The proposed approach is sound and the requirement for user feedbacks is more reasonable, compared to prior work—Users do not need to know about the mediated schema. Their effectiveness is validated over varying ranges of user errors. I appreciate the relaxed requirement for user feedbacks which makes its deployment more realistic. I think this is an important claim, though not very well supported by both framework and evaluation. D1: First, incorrect feedbacks are not being treated systematically. Erroneous decision is reversed by a correct feedback, which seemed rather ad-hoc. Does this mean even after sufficient correct feedbacks to achieve perfect accuracy, a single (or few) outlier feedbacks can decrease the accuracy? In general, Section 4.4 seems to assume incorrect feedbacks are followed by correct feedbacks to be fixed, which may not be true when error rates are high. D2: Second, evaluation supporting Section 4.4 are based on simplistic user modeling of 10 or 20% user errors. It would be more convincing if authors

	can argue this rate of errors is reasonable to be assumed. For example, we can ask AMT worker for feedbacks and show they incur less errors than these numbers. D3: Lastly, as making more realistic assumptions on user feedbacks is an important contribution, more arguments to support this claim would strengthen the work. The following work discusses such aspects more convincingly: Corleone: Hands-off Crowdsourcing for Entity Matching, C. Gokhale, S. Das, A. Doan, J. Naughton, N. Rampalli, J. Shavlik, J. Zhu. SIGMOD-14. For example, evaluating the expected precision at this point would be helpful, as not all users know what to expect from queries and are qualified to give feedbacks. For those users, some guidance about the quality of results would be helpful. Also, it is unclear when to stop improving schema. This is also related D2, if having more feedbacks can negatively affect the precision after certain point. Section 5.3 of the above paper discusses these aspects. D4: Having real-life user feedbacks using AMT (or other user study) would help addressing all the three points above.

Masked Reviewer ID: Assigned_Reviewer_2

Review:

Question

Overall Rating	Weak Reject
Summary of the paper (what is being proposed and in what context) and a brief justification of your overall recommendation. One paragraph	The paper presents a novel approach to pay as you go creating of a mediated schema over multiple web sources. Its novelty lies in the usage of user feedback on data errors observed when issuing queries over a source schema. After a motivating introduction the effects triggered by a user annotation of correct or incorrect tuples are discussed (e.g., adding attributes to the mediated schema, splitting attributes of the mediated schema, etc.) Next, the paper shows that the set of proposed operations always allows to get from a mediated schema to any gold standard a domain expert may determine. An experimental evaluation shows that the proposed method may be effective in practice. Overall, the paper is nicely written and easy to follow, however, I am not convinced of the novelty and improvement this paper makes over existing works. One reason is the lack of comparison to any other pay as you go integration method.
Three (or more) strong points about the paper (Please be precise and explicit; clearly explain the value and nature of the contribution).	- The paper is well written and easy to follow. - The solution is simple and nicely illustrated. - The experimental evaluation is based on real-world data

Three (or more) weak points about the paper (Please indicate clearly whether the paper has any mistakes, missing related work, or results that cannot be considered a contribution; write it so that the authors can understand what are seen as negative aspect	- The paper focuses on the problem of refining the mediated schema based on queries a user issues over a data source schema. While this is somewhat discussed and motivated in Section 2, I do not fully grasp the motivation behind this. Limiting the view of a user to the schema of a data source seems to possibly be too restrictive and may incur higher time / higher number of interactions before the result converges (hopefully to the gold standard). Also, the motivating example used throughout the paper does not start with this assumption, which I find quite unfortunate. Overall, I an not convinced of the practicality of the approach.and its benefits wrt existing works (also relates to my second comment). - The experimental evaluation lacks any comparative evaluation to previous work. Even though the approach is different from previous ones, they aim at the same goal so the question is which one is better. A comparative evaluation should be included in the paper. - Instead of some lengthy examlples, I would have appreciated some more in-depth discussion and formal definitions in Section 4.
Relevant for PVLDB	YES
Novelty (Please give a high novelty ranking to papers on new topics, opening new fields, or proposing truly new ideas; assign medium ratings for delta papers and papers on well known topics but still with some valuable contribution).	With some new ideas
Significance	No impact
Technical Depth and Quality of Content	Syntactically complete but with limited contribution
Experiments	OK, but certain claims are not covered by the experiments
Presentation	Reasonable: improvements needed
Detailed Evaluation (Contribution, Pros/Cons,	See my comments in weak points above.

Errors); please number each point	

Masked Reviewer ID: Assigned_Reviewer_3

Review:

Question

Overall Rating	Weak Reject
Summary of the paper (what is being proposed and in what context) and a brief justification of your overall recommendation. One paragraph	This paper studies the incorporation of user feedback into a web data integration system. Specifically, it uses a pay-as-you-go approach: first create a mediated schema automatically, then use the mediated schema to answer user queries, and finally adjust the mediated schema based on the feedback provided by the user on query answers. Overall, the paper provides a thorough treatment of the approach it proposes. The inject, confirm, split and blacklist, merge and adapt operations look reasonably complete. The experimental results are also convincing and thorough. My main concern is the insufficient comparison with related work. See below for details.
Three (or more) strong points about the paper (Please be precise and explicit; clearly explain the value and nature of the contribution).	S1. well motivated problem S2. the refinement operations are well thought out and look comprehensive S3. thorough experimental analysis
Three (or more) weak points about the paper (Please indicate clearly whether the paper has any mistakes, missing related work, or results that cannot be considered a contribution; write it so that the authors can understand what are seen as negative aspect	W1. insufficient comparison with the related work

Relevant for PVLDB	YES
Novelty (Please give a high novelty ranking to papers on new topics, opening new fields, or proposing truly new ideas; assign medium ratings for delta papers and papers on well known topics but still with some valuable contribution).	With some new ideas
Significance	Improvement over existing work
Technical Depth and Quality of Content	Solid work
Experiments	Very nicely support the claims made in the paper
Presentation	Excellent: careful, logical, elegant, easy to understand
Detailed Evaluation (Contribution, Pros/Cons, Errors); please number each point	D1. My main concern on the paper is the insufficient comparison with the related work. Incorporating user feedback into web data integration is a topic that has been extensively studied. The author surveyed some of the existing work in the related work section, and tried to argue the differences between their design and the previous ones. One concern though is whether such differences are enough to justify introducing yet another design paradigm to the already crowded space. For example, I'm not quite convinced by the argued superiority over [5]. The arguments would be much more convincing if the authors can run user studies demonstrating which scheme is indeed easier for the user. There are also some missing references, e.g., X. Chai, B.-Q. Vuong, A. Doan, and J. F. Naughton. Efficiently incorporating user feedback into information extraction and integration programs. SIGMOD 09 P. P. Talukdar, M. Jacob, M. S. Mehmood, K. Crammer, Z. G. Ives, F. Pereira, and S. Guha. Learning to create data-integrating queries. PVLDB 08