



**Autorité de Régulation des
Télécommunications et des Postes**

DATA VALIDATION AND PROCESSING ON DIGITAL FINANCIAL SERVICES

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« Une autorité de Régulation de référence, acteur déterminant du développement de l'économie numérique, pour un Sénégal émergent »



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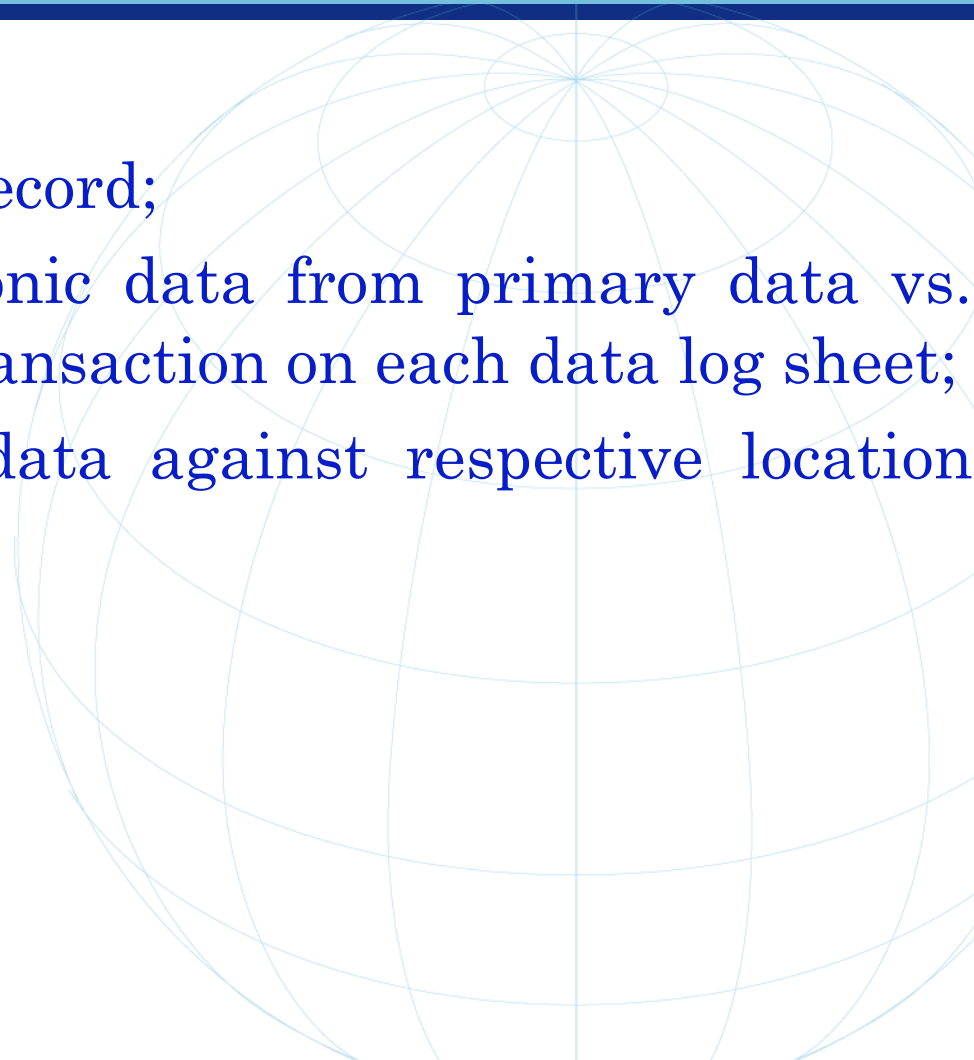
Introduction

The level of data validation and processing is very important in each human activities especially in Digital Financial services. We need to ensure clean and accurate data to monitor QoS on Digital Financial Services.



Tests on DFS data

- Check if all backup systems record;
- Check time spans for electronic data from primary data vs. backup copies first and last transaction on each data log sheet;
- Check timestamps of DFS data against respective location logs.





Tests on DFS data

- Check timestamps of background measurement data against respective location;
- Decide on necessity to exclude time ranges. For example, if the location log indicate special events and conditions, which set the need to exclude data from the set.
- Visualize timestamps of transactions: Are there any gaps or unusually dense transactions during a period of time? If yes, validate reasons.



Test on background data test

We have to ensure the following information:

- If GPS data are available;
- If the location is indicated;
- If there is no mismatch between GPS data and location;
- Make sure there are no gaps in transactions.



Cross tests between data after import

- Validate time stamps of DFS and background data for consistency.
- Validate consistency between network unavailability in DFS and background data. A possible consistency problem exists if background data indicate network unavailability but DFS transactions work during a given timespan. If such periods of time exist, mark them in the database and seek further clarification.



Additional processing

These two additional procedures may be done due to their importance.

- *Check consistency of accounts throughout a sequence of information SMS.*
- *Check for “false negatives” (ref. Money Transfer False Negative Rate MTFNR) by comparing account balance against transaction results.*



Conclusions and Recommendations

- Data validation and processing are very sensitive tasks and they affect easily QoS results on DFS. We have to deal with clean and accurate data in all the value chain.
- If budgetary conditions allow fully automated DFS transactions is the best choice because it would eliminate all sources of error.

Thanks you



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