

Draft report of the 3rd meeting of the GRSG Task-force on UN Regulation No. R39 covering mileage values

Date: Wednesday 30 August
Thursday 31 August
Venue: OICA, offices – Paris
Virtual: MS TEAMS
Chairman: Tim Guiting, NL (tguiting@rdw.nl)
Secretariat: Olivier Fontaine, OICA (ofontaine@oica.net)
Documents: Task-force dedicated wikipage

1. Welcome and Introduction.

The chair welcomed the participants and summarized the work achieved to date at the previous sessions.

2. Approval of the provisional agenda.

Document: TF-39MV-03-01e.

The agenda was adopted without any change

3. Approval of the draft minutes of the TF-R39MV 2nd session.

Document: TF-39MV-02-07e.

The minutes were approved without any change.

➤ Presentations.

Document(s): [TF-R39MV-03-05 \(B\)](#)

State of play in the USA:

The chair informed that he approached the USA prior the meeting:

- NHTSA, representative at WP.29 Jane Doherty, Director International Policy, Fuel Economy and Consumer Programs, U.S. Department of Transportation National Highway Traffic Safety Administration
- David Sparks, Kevin Porter in her team, specifically the fraud team within the Internationally Policy section. They are criminal investigators, investigating fraud related to odometer tampering.

Tampering:

They explained that in the US, vehicles do not have to be equipped with odometers. But it is illegal to tamper odometers and offenders are penalized. It is also illegal to offer equipment for sale by which odometers can be tampered. They also mentioned that this kind of equipment, including mileage blockers, can be easily bought from internet and is often coming from EU countries. It seems that the fitment of an odometer is not mandatory in the USA, but if fitted, it is prohibited to tamper it. Some illegal devices are imported (mainly from EU) and affect the figures.

They furthermore mentioned that it is required in the USA to disclose odometer readings during sales.

The criminal investigators may get access to a vehicle history as regards mileage values, if available. The information is then coming from police reports after a crash. The team in addition is used to collaborate with Interpol. A national independent system called CARFAX (also filled at repair facilities) is utilized by the vehicle owners.

The chair pointed out that most vehicles sold in the USA actually are equipped with odometer.

On a regulatory point of view, the legal system in the USA is distributed in two primary rules:

- (1) prohibit tampering of motor vehicle odometers; and
- (2) provide safeguards to protect purchasers in the sale of motor vehicles with altered or reset odometers. Reference of regulation US: 49 CFR Part 580 ODOMETER DISCLOSURE REQUIREMENTS (Code of Federal Regulation)

Details of these two aspects can be found following this link.

In addition, the text ensuring the disclosure of odometer information can be found with this link.

Accuracy:

As regards accuracy, the USA have no federal legislation while there had been discussions and even lawsuits. The USA representative mentioned one particular case that concerns a consumer sewing a vehicle manufacturer in 2007 because of an odometer reading likely deviating from the actual mileage of the vehicle. The consumer claimed a warranty issue and won the case. The manufacturer then had to offer 6 million vehicle owners in the US warranty extensions and, in some cases, even payments because the odometers in their vehicles rolled up miles too fast. The justification was that the consumers had been negatively impacted by odometer reading deviation because warranties expired too soon compared to the actual mileage. This also hit some lease customers with excess-mileage penalties. Interesting was that the lawyer in the lawsuit prompted that the manufacturer deliberately set fast odometers to trim warranty costs. But the manufacturer claimed just following an industrywide standard that allows variation in odometer accuracy by a few percent.

The chair furthermore informed the group about the SAE (voluntary) standard (Society of Automotive Engineers) indicating an accuracy of plus or minus 4 percent. (J2976-202205). The chair is currently in contact with Mr. Gouse from SAE for more information and awaiting his reply. The hope is that more SAE informal can be helpful for this group.

State of play in the Belgium and the netherlands:

Mr. M. Peelman informed about the Belgian Car-Pass system per the document TF-R39MV-03-05 (B)

The project started about 20 years ago

About 700/750.000 2nd hand cars and LDVs sold yearly

The Car-Pass system is a Joint effort by Authorities and Industry

System:

- Odometer fraud is criminal
- Central database with odometer readings M1N1
- Car dealers, repair shops, PTI stations, etc are required to transfer VIN, odometer mileage, date to Car-Pass
- Seller must inform about the mileage

Objective:

- Extra info about 2nd hand vehicles to the buyer
- Reduce fraud with imported vehicles
- Prepare the future: 4 readings/year mandatory for connected vehicles.

Last amendment last year:

- Car-pass data must be available for research and statistics (commercial purposes prohibited)
- Transfer of data about work performed on the vehicle by the repair body.

Note: the system is blind to who is the owner or the driver of the vehicle

In practice:

- Non-profit organization manages the Car-Pass system
- Board made of
 - o FEBIAC
 - o Dealers
 - o PTI companies
 - o Touring services, Ministry of economic affaires
 - o MOT
- Staff: 11 persons
- Mileage certificate is for 10,40€, no public founding, Car-Pass is a self-standing association

Figures:

- 760 262 documents issued last year
- ½ of data coming from professionals, 1/3 from PTI, 10% from OEM (for connected vehicles). This later proportion will grow since the number of connected vehicles will increase in the future
- Partnership with RDW

Effective system: 1344 fraud cases compared to about 80000 cases a year prior the Car-Pass.

Exchange in EU:

- with NL → shows a notable decrease in fraud.
- With SLO: 3,5% fraud
- Latvia: about 400 odometer reading per month

Conclusions:

- Fraud expensive to EU, also negative in terms of safety
- Need for technical standard to make odometer tamperproof.
- Recommends international exchange of data contained in respective national odometer register
- B/NL collaboration is proven effective

Q&A:

- European Commission:
 - o Definition of connected cars? OTA data transmission as defined in the Belgian legislation. For example, the car that can be managed by a smartphone application
 - o When is the 1st reading of the mileage? As soon as the vehicle is serviced in a workshop. In general, 8 odometer readings are already available at the 1st PTI (4 years). If the vehicle is connected, then 16 readings after 4 years.
 - o How to handle the VIN? In Belgium, the legal framework permits Car Pass to collect the VIN in spite of the private data protection. Recall: Car-Pass does not get any info on the owner of the vehicle.
- NL:
 - o When export to another EU country, possible to have the Car-Pass from B? No, need to attend a Belgian service station. Examples of French citizens asking the data. The answer provided by Car-Pass is only a OK/NOK about the relevancy, yet with no details on the mileage etc.
- OICA:

- Any connection with the EU database on CO2 emissions? Or will it be in the future? No direct link. Car-Pass does not download data from EU database
- How is the data secured? The ID system is not secured. Only the internal system is secured via the ISO 27001 certification. The only added value is the chart. No certainty that nobody makes mistake. Internal rules: self-correction for simple errors.
- What about statistics on vehicle age fraud? Tampering is happening with all types of vehicles. Usually, high yearly mileage are a good target. Also, psychological limits (e.g. 200.000 km). Imported cars are more subject to fraud
- UK:
 - OEM data only for connected vehicles? No all vehicles.
 - Criminal action in case of fraud? That fraud is no priority for the B police. The system is primarily dissuasive. The buyer can legally cancel the purchase if the seller does not provide the Car-Pass document.
- F:
 - Are there technical principles you can propose to prevent tampering? Fraudsters invest lots of resources to maintain their business. Not only technical solutions, rather the transparency of the vehicle history provides more benefits. The market is then becoming more transparent. Both measures should go hand in hand.
- Secretary: what would be the benefits of anti-tampering of odometers, since the benefits of Car-Pass is already high w/o anti-tampering measures (ref to Slide 10 of TF-R39MV-03-05)? Kind of ethical point: the E° should be well protected. The need for proper E° protection will increase in the future.
- Chair: what about intentions to export the idea throughout EU? This is part of the discussions in the roadworthiness debates. Lot of countries have PTI etc. DG-Trust, as responsible for protection of the citizen, were alerted, but not much progress to date.
- Mr. Peelman confirmed that there is no access to the Car-Pass data from the internet.
- UK:
 - What about the behaviour of the OEMs toward Car-Pass? Depends on the OEM. As it is a national system, some OEMs were reluctant to adapt their logistics for one country. But most were positive.
 - How complex was to establish the system? basically, no problem, the challenge was not too big.

The chair thanked Mr. Peelman and Mr. Vermeulen for their valuable contribution.

Mr. Peelman kindly invited all interested parties to approach him:

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4. Terms of Reference.

Documents:

- TF_R39MV-02-03-r2e (Secretary)
- TF_R39MV-03-02 (Secretary)

Endorsement of the draft terms of reference. Document TF_R39MV-02-03-r2e reflects the state of the text after the 2nd meeting of the task-force. The document TF_R39MV-03-02 is the same text without the track changes.

The secretary confirmed that the document TF-R39MV-03-02 reflects the state of play of the text

NL: anti-tampering cannot really be addressed for L category. However, accuracy should be addressed since it is applicable to that category. There is actually no good justification not to include L category for accuracy.

The chair recalled that IMMA informed the Bureau that they could not be present at the meeting.

One L7 category manufacturer informed being actually following the M1 specifications for their L7 production. However, in view of the technologies used in those vehicles, improving the accuracy would probably be difficult.

F: there is indeed a place for discussion about L category on accuracy. NL agreed there seems to be currently no fraud problem in the NL for L category, rather some other reasons as listed in the document GRSG-125-05. A concern for example is when a motorbike is for rent, the client may have to pay more than expected because the odometer would show a value higher than the reality. For taxation purposes as well, there could be a necessity.

The chair suggested the group endorsing the terms of reference unchanged, and recommended any contracting party to raise their potential concern at the GRSG session of October.

NL committed to approach IMMA on the subject of L category odometer accuracy

Conclusion:

- Document 03-02 adopted unchanged and
- will be sent to the GRSG Secretariat as an informal document.
- NL to approach IMMA prior GRSG-126.

5. Collecting relevant existing data, research and standards available in the contracting parties. (wiki page)

Document: TF-R39MV-03-04 (ROK)

The chair requested the contracting parties to provide information on their domestic situation. UK committed to provide data as soon as possible.

ROK presented the document TF-R39MV-03-04, focusing on passenger cars (M1).

Situation similar to most countries. 2 stages: homologation then after-sale.

Homologation: at engine test 6500 km, in case of fuel consumption: 3000 km. the distance is important since it is not much bigger than the tolerance.

After-sale:

- concern that the positive tolerance can bring warranty to end earlier than expected.
- PTI
- Price of 2nd hand vehicles: mileage is a factor, however not a determining factor.
- Insurance rates: usually 15000 km/year is a threshold for additional insurance price.
- fuel efficiency

The study focuses on M1. About L category, there is no regulation in ROK.

ROK added that while there is currently no requirement, it was a recommendation by the government that the OEM increase the accuracy of the odometer. Yet ROK have currently no strict requirement and domestic manufacturers have internal rules. The representative of ROK committed to further investigate the situation.

The chair requested ROK to inform the document TF-R39-02-04-r1 with the input from the document TF-R39-03-04.

OICA requested information about fraud in ROK: there is no official data nor anti-tampering regulation in ROK, yet tampering actually exists as in all countries.

OICA pointed out that it is difficult to address a problem if there is no data. Any solution we can propose will be impossible to assess, or even impossible to know whether it addresses the problem, if there is no reliable data to back the solution. ROK pointed out that the Euro6 mandates mileage measurement and check.

ROK informed in addition that while the mileage recorded at PTI at every check point is introduced into a national domestic database, there is no action of analysing that data so far. The record is actually mainly performed for monitoring the increase of the mileage value.

Conclusion:

- information from ROK to be added into document TF-R39-03-04
- ROK to further investigate the situation on mileage and tampering.

6. Accuracy of the on-board odometer mileage values

Document: TF-39MV-02-04e & rev.1.

The chair committed to investigate SAE and USA situation. (SAE and CFR standards will be uploaded)

The wiki page will be updated on a regular basis.

7. Security management and anti-tampering

Document: ECE/TRANS/WP.29/GRSG/2015/16 (FIA)

OICA

- Tachograph is a tool to measure and record activities (driving, working, resting) of a professional driver.
- Regulation was last amended in 2021.
- Technology started with mechanical systems
- Last month, a huge technology step was performed to introduce E° secured GNSS.
- Tachograph is linked to domestic legislation on working time. Speed is also measured since the vehicle speed is limited per the traffic rules.
- Hence mileage is derived from time and speed.
- The technology step introduced anti-tampering requirements.
- This is an endless race. E.g. the last amendment was for preventing tampering of the GNSS.

OICA:

- Until last week, the compromise on position detection was a positioning at start and end of the travel, + one positioning every 3 hours. As from last week, the positioning at cross border is added.

- Tachograph is a complete system on- and off-board.

FIA provided info about GRSG/2015/16

Mr. Guido Gielen was approached, FIA still awaits information that will be forwarded to the group. The chair requested FIA to send an expert to help the task-force.

OICA questioned the level of security requested in the document. What are the expectations of such a high level of security?

The chair reminded the discussions held at GRSG at the time: the proposal wouldn't fit the 58 Agreement. It was also proposed that the ITS-AD informal group would investigate a broader perspective. However the informal group did not put the resources to address this item. There was no discussion on the content of the proposal, rather on the principles.

OICA questioned the contracting parties about the expectations of the contracting parties on the tachograph security, anti-tampering and level of accuracy.

F:

- Need indeed to investigate the level of security requested for tachograph.
- The UN R155 contains a list of possible threats. Our task-force must address the CS requirements and check whether odometer is part of it.
- About Tachograph: the task-force must indeed debate the item.

NL:

- the current requirements (in the emission regulations) are not objective, hence difficult to implement. If we fix that problem, the systems will not be tampered anymore, but still accuracy should be addressed.
- About tachograph, NL is aware of the big step just implemented. Of course no need to re-invent the wheel, yet need to check the situation can improve.

OICA: on CS of tachograph, a higher level of security would be extremely burdensome. This is illustrated as from the design level, since the engineers must work in a highly secured area, and the production sites must be secured as well. Also, the chain of production must be addressed (suppliers, external development, etc.). Should such high level of security be mandated, the ABS system should be totally isolated from the rest of the E^o architecture. This would have huge effect on the vehicle and the production chain.

UK and the chair agreed that the requirements of the task-force must be proportionate to the benefits. Seems the level requested by the tachograph would be disproportionate to the expected benefit.

OICA also pointed out that the tachograph requirements on accuracy are so high that they make burden on all parties: the OEM and the user (owner of the vehicle). Hence the arguments on the tampering also apply to the accuracy.

Conclusions:

- FIA to provide further information

8. Test method

Document: TF-R39MV-03-03 (Chair)

The chair presented the document, and insisted this is a “placeholder” rather than a position.

Scope: Taken from the terms of reference.

Definitions:

- Definition of distances are taken from the terms of reference since the group found necessary to distinguish the entities.
- “tampering” is taken from the Euro7 and the tachograph regulation.

Requirements:

- Odometer accuracy: drafted on the basis of common sense. The provisions can be aligned on the SAE standard.
- Odometer – general
- Odometer – anti-tampering: some of the language is taken from Euro7

Annexes: placeholders

NL: the COP requirements should be adapted as well.

Chair: the regulatory process is still totally open (amendments to UN R39 vs. a new regulation or other solution).

OICA: the structure can be acceptable, but the content of the proposal needs substantial amendments.

Scope:

- OICA: how to identify the “vehicles equipped with tachograph” for excluding them from the scope. For sure those vehicles are not restricted to M3N3. Some vehicles use the tachograph as a source of data for the odometer.
- There was a debate on the time the manufacturer’s liability continues. On the one hand, the responsibility of the manufacturer does not end after 2 years, on the other hand, the regulation in Europe is that the liability ends after 2 years.
- Trip meter:
 - o accuracy and precision should be the same for both the odometer and the trip meter.
 - o OICA: trip meters are currently not regulated, hence no need to include them.
 - o Conclusion: trip meter to be totally removed from the document. Decision to be confirmed at next meeting.
- The Secretariat questioned the wording “**this Regulation is without prejudice to the application of national and regional legislation on tachographs**”. The question is whether any UN regulation can be of prejudice to a national legislation.
- The group also addressed the Footnote 2 and OICA committed to check whether that footnote 2 may address the tachograph issue.
- Conclusion:
 - o OICA committed to propose a wording to exempt the vehicles having a tachograph used as odometer. Some non-European tachographs must be taken into account as well.
 - o trip meter to be totally removed from the document. Decision to be confirmed at next meeting
 - o Footnote 2: OICA to check footnote2 vs. tachograph.

Definitions:

- OICA questioned “Total distance travelled” since the true value should be somehow measured. NL and the chair pointed out it is a theoretical value. NL suggested to call it “true distance” in parallel to the “true speed”. UK supported this approach.
- UK questioned the necessity of a definition for the “total distance value”. The question is also valid when e.g. the gearbox is replaced. The chair informed this will be addressed in paragraph 5.11

- NL questioned paragraph 2.7. “carrying a driver weighing 75 kg”: UN R39 is the only regulation mandating a certain weight for the driver.
- The experts agreed that the “true distance travelled” is a theoretical distance, unknown by the vehicle, yet measured at the time of the test. The group agreed to indicate a reference to Annex 4
- The group agreed to investigate the case when a fundamental component (e.g. gearbox) is replaced, with a dedicated mileage value that could conflict with the recorded odometer mileage.
- NL: “driven by the vehicle -it is mounted on” would better address the value since separate component could be added.
- Paragraph 2.6.4. to be further evaluated.
- “tampering”:
 - o UK: questioned whether the display is included. The chair pointed out that the definition includes the display.
 - o UK: Could tampering also include the intentionally inaccurate recording of mileage values? Such as through the use of dampeners? Or do we think that the definition covers it?
 - o OICA/F: there can be a modification of the displayed value without affecting the stored value. Hence the display should be well addressed. UK: Something such as 'means the intentionally inaccurate recording or misrepresentation of mileage values stored and/or displayed'? F questioned the “intention” of the driver: the odometer tampering can be a side-effect of a malware subsequently activated by a regular action by the driver (this was debated at the time of CS discussions for UN R155).
 - o Conclusion: seems a more generic definition than the original proposal is favoured by the participants.

The group subsequently resumed consideration of the document.

Anti-tampering:

OICA stated that the UN R155 (CS) already covers mileage manipulation. OICA wanted to understand how it can be understood that the odometer tampering is not yet covered while it is stated in R155 that it is covered.

The chair suggested to address accuracy when all experts in CS are present in the meeting. OICA subsequently questioned the need for anti-tampering needs, since UN R155 already addresses mileage in its item 20.4 of Annex 5, Part A. and B5. The case of the hacking is also addressed in this regulation. Per UN R155, the OEM must show that the performance is achieved, w/o showing the means.

NL: data manipulation is not covered in UN R155, not totally as NL wants it to be covered at the task-force. The manipulation of the SW is perhaps covering the manipulation of data.

OICA was keen to see how the UN R155 does not address the concern of odometer tampering.

UK: pointed out that not only the OEMs and the product are at stake. The rest of the system must be adapted accordingly, i.e. it is inefficient to increase the performance of the odometer, whether in terms of accuracy or tampering, if there is no improvement of the situation in the field.

Conclusion:

- Task-force to investigate how much UN R155 covers anti-tampering
- Chair to scrutinize internally the scope of UN R155 in terms of odometer anti-tampering.

Accuracy:

Paragraph 5.6. to 5.8.

paragraph 5.7

OICA:

- Why is the value deviating from the speedometer?
- Why 4.0%

NL: the tolerance in speedometer in a one-direction deviation (positive), vs. two-direction deviation for the odometer (positive and negative). SAE standards recommend +/- 2.5% OICA clarified that the odometer accuracy should follow that of the speedometer since they share the same distance sensors. SAE is used primarily in the USA.

UK: questioned how likely the odometer accuracy may vary with time. Chair: SAE is only a standard. OICA for HCVs: accuracy indeed varies over time, and the odometer is re-calibrated at the service station. LCVs odometer accuracy also varies over time and mileage due to external factors.

The chair clarified that the proposed value of 4% is a personal assumption as a good value and shared the opinion that the tolerance for the speedometer is too large for the odometer. In view of the use cases, the 10% tolerance seems too large.

OICA noted that, following that logic, there is theoretically no limit to the decrease of the tolerance, it could be 1% as well.

UK: Agreed 10% seems too relax yet could not propose a better value. Those proposing a new value should justify it.

OICA

- pointed out that e.g. a driver changing from winter to summer tyres should not be accused of tampering, hence need to keep a sufficient tolerance
- questioned the meaning of talking about a tolerance with no measurement procedure to assess the values.

UK: Are winter and summer tyres a different diameter? Tyres with same diameter (different brand for example) have different rolling resistance coefficients, which already give a difference in accuracy. OICA: the concern of the tyres is that there is no requirement about their dimensions. Only ETRTO provides a standard, re-edited on a yearly basis. The problem is the measurement of the tyre diameter.

NL: in the frame of TA, the focus is for a certain vehicle, with a certain set of tyres. OICA answered that the problem is about durability.

OICA then summarized that the target of the group is the accuracy at the time of Type Approval. As a consequence, the problem of tampering is not addressed either.

OICA pointed out that market surveillance exists in the EU, with no clue on which tyres are fitted on the vehicle at the time of Type Approval. Then it is unclear for the re-testing at the time of market surveillance. The chair pointed out that our work is to mandate the mention in the test report. The EU Directive on market surveillance mandates test conditions "alike" those of the Type Approval test.

The group tried to identify where the accuracy could be improved;

F: speedometer needs the 10% tolerance for the sake of safety since the driver must have an over evaluated speed value. The case of the odometer is different and its accuracy can evolve.

OICA: the odometer accuracy depends mainly on the tyre dimensions tolerances and accuracy. And the tyre tolerances cannot be compressed (influenced).

D: suggested to check the taximeter distance measurement and its accuracy

Test procedure:

The chair requested OICA to provide their view.

OICA suggested to base the test on the WLTP cycle. However, the limitation is the small distance travelled, that could affect the measurement of the accuracy.

Conclusion: OICA to provide information on the WLTP test cycle and a possible test method possibly on that basis.

General conclusion:

- All to provide comments as relevant to the document.
- Adopted text to be highlighted in green
- **Scope:**
 - o OICA committed to propose a wording to exempt the vehicles having a tachograph used as odometer. Some non-European tachographs must be taken into account as well.
 - o trip meter to be totally removed from the document. Decision to be confirmed at next meeting
 - o Footnote 2: OICA to check footnote2 vs. tachograph.
- **Definitions:**
 - o “Total distance travelled” turned into “true distance travelled”
 - o “Tampering”: seems a more generic definition than the original proposal is favoured by the participants
- **Anti-tampering:**
 - o Task-force to investigate how much UN R155 covers anti-tampering
 - o Chair to scrutinize internally the scope of UN R155 in terms of odometer anti-tampering.
- **Accuracy:**
 - o All stakeholder have interest in having an accurate odometer (user, contracting parties, OEMs)
 - o All to provide background information
 - o All to suggest a value for an accuracy
 - o All to provide proper justification for the value their propose
- **Test procedure:** OICA to provide information on the WLTP test cycle and a possible test method possibly on that basis
- All to review the general requirements section.

9. Summary of the session and action points

The chair summarized the session and pointed out that the group listened to the presentations about the domestic situations in Belgium, The Netherlands and Korea. The task-force may expect some more information from Korea during a next session. The chair also reported from a meeting with the US colleagues about their domestic situation as regards mileage fraud and accuracy. And then also that an SAE standard exists that may be of help to this group.

The chair furthermore was pleased that the group agreed to forward the terms of reference to GRSG (done on 30 August). The chair then recalled that the experts looked into the initial draft working document and started the substantial discussions. He pointed out that we may expect a proposal from OICA to address vehicles equipped with tachographs in the scope, that we all would look to the definitions of the mileage values stored on-board the vehicle and the tampering, that we may expect a first proposal from OICA on an accuracy test procedure, possibly based on WLTP, that we all would look into the justifications for a particular accuracy value. Then the chair stressed that all parties should prepare for the other draft general requirements listed in the document and finally that the group would need to look into the anti-tampering and security management in relation to UN R155 to understand

whether the anti-tampering is already sufficiently being addressed by that regulation or that additional requirements are necessary.

10. AOB.

There was no information to share nor item to discuss under this agenda point.

11. Next meetings.

4th meeting:

- Secretary to organize a Doodle
- Virtual vs. hybrid: Hybrid
- Time: pm/am is favoured
- Date: end of October (preferably CW43 or 44) 26 October?

Note of the Secretariat: 2-3 November, starting at 1:30 pm the 1st day, finishing at 12:30 am the last day.

- Venue: Brussels?

Note of the Secretariat: RDW offices - 95 rue Froissart 1040-Brussels – Hybrid meeting

5th meeting: December?
