

Expertises: Reading, Writing & Assessing them

Security and Privacy
VSE Prag, 7 - 11.6.2010

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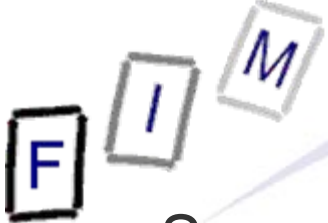


- Anatomy of an expertise
 - Introduction, glossary etc.
 - Facts & discovery procedure
 - Method of evaluation and results
 - Conclusions
- Tips to look out for
- Expertise's and courts



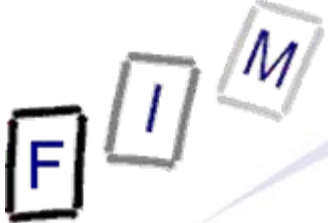
What is an “expertise”?

- Expertise = Discovery of important facts and/or drawing conclusions from facts
 - Both are intended to help others which cannot do this themselves
 - Typically used in connection with a legal action
- Two main types:
 - Court: The court itself wants to know the real facts
 - » Not what the parties tell it
 - » Additionally: Provide the court with information on what typically follows from certain fact/actions/... (experience)
 - Private: Someone wants to provide a counter-expertise to the court, or as preparation for court proceedings
 - Scientific expertise: Something different!
 - » Main issue is here the discovery of something new
 - » This is typically NOT interesting for expertises (→ proven and generally accepted!)



Why do we need an expert for this?

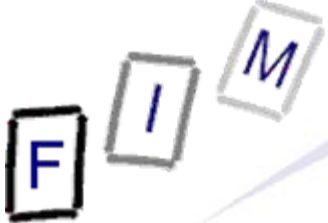
- Source of information:
 - Neither court nor parties know perhaps anything about it
- Source of explanations:
 - Explaining complex situations or reasons for laymen
- Source of reasons: Why did this happen?
- Legitimacy:
 - Independent, objective, impartial
 - We have to trust someone, so he/she should live from something else (no interest in being expert), not involved in this conflict (no interest in outcome) and not deciding
- Biggest problem: At the experts mercy
 - Nobody knows anything
 - A “god” sends the decision from “heaven”
 - » You just have to trust in the correctness
 - » Which might be very difficult if you lost!



Anatomy of an expertise

- An expertise is almost always a written expertise
 - Which might be required to be expanded on orally in court, where questions to it are possible too
 - » There the curriculum vitae of the expert might be questioned
 - Oral expertises should (ideally) follow the same pattern!
- Overall structure:
 - General information: Who has requested the expertise, file number, date, ...
 - Title and topic: What was to do
 - Surrounding activities: What do parties agree upon
 - Findings of fact: What was measure in which way
 - Conclusions: Fact + laws of nature/experience = ???
 - Summary: The result without any facts, reasons etc.
 - Signature: Date, signature, stamp

- Separate: Invoice



Front matter

- General information: Who has requested the expertise, file number, date, ...
- Title: General summary of the main point
- Topic: What were the exact questions to the expert?
 - Courts should ideally provide exactly worded and very specific questions
 - » E.g. “Did person A copy file ‘abc.txt’ on enclosed USB stick?”
 - » Practice (at least sometimes): “Expertise on all relevant matters”
 - Private expertise: Exact description of what was to do
 - Note: This is important for possible liability
 - » Only in exceptional cases should there be anything in which was not asked for
 - Example: Hidden problem potentially very important for the outcome, but which nobody suspected to be there
 - Should explicitly include whether only facts, only conclusions or facts and conclusions were asked for



Facts and discovery procedure

- Discovery procedure: Exact specification of
 - When, where, who did the measurement
 - » Typically all parties should be present or at least offered the possibility if done at one parties premises
 - How was the measurement performed
 - » What other options do exist, why was this one chosen
 - How “good” is the measurement
 - » Margin of error: Accuracy possible (typically as range)
 - » What can be detected in this way **and what not**
 - Often forgotten: The limits of the methods employed!
 - » Example: Looking for the string “€ 1000” in all files
 - ASCII vs. UTF-16? “EUR 1000”? “€ 1.000”? Deleted files? ...
- Facts discovered: What was found (and what not)
 - Specify exactly and only what was found
 - » No conclusions here
 - » No “generally this would also be here”



Facts and discovery procedure

- Describe how you validated the result
 - » I.e., what was/should have been there but was (not) found
- No conclusions: Only and solely what was actually “measured” in some way
 - » “The following bytes were found in sector xyz: AABBCDD”
 - » “A deleted image showing ‘qwertz’ was found”
 - » Not: “A delete image of child pornography was found”
 - Whether this is child pornography or not is for the court to decide!
- State clearly if something could not be measured
 - » “There is not enough data to show whether this took place”
 - » Still useful for the judge: Rules of evidence!
- Do not search for additional things
 - » This might in extreme cases be criminal behaviour
 - An expert is not the police; he/she should look for clearly defined elements **only**
 - » If unavoidable to notice, briefly mention them



Method of evaluation and results

- How did the evaluation take place?
 - Statistical/mathematical methods? Previous experience?
 - Actual experiments?
 - » How were they performed? What differed from actual outcome?
 - » What equipment was used?
 - Facts obtained from third parties?
 - » Often: What is “typical” in business → Ask others what they do/expect others to do/write in contracts/...
 - » Who was asked for information and who actually answered
- What was the result and how likely it is
 - Is it a law of nature or is this a possible result, which sometimes might perhaps occur?
 - » “Hard” results wanted, but **don't** state more than justifiable!
 - Only mention, what is important for the questions
 - » No additional research!



Method of evaluation and results

- Answer the questions in detail: „Yes“ or „No“ is unacceptable
 - Another expert must be able to exactly verify your results and check, whether the facts support the conclusions and whether the methodology used is sound
 - Try to write in a way so that laymen can understand and follow the reasoning as well
- State clearly if no results could be reached
 - And what might be done to improve the situation
 - » Expensive experiment, a lot of work, missing data/objects, ...
- Describe possible sources of errors
 - What was not investigated and why
 - What other methods exist and why they were not used
- Never draw legal conclusions
 - Remain on the level of technical facts and conclusions



- Summary: Brief repetition
 - Each question should be answered briefly
 - » Only the result, not why this is the outcome (→ see before)
- Signature: Date, signature of expert, stamp
 - Note: In Austria the stamp is required also for private expertises if performed by an official court expert
- Possible additions:
 - Glossary: Explanation of terms used in the expertise
 - Addendums: Screenshots, photos, handbook copies, ...
- Not included should be:
 - General literature: Only literature directly used for facts or conclusions; no “background” material
 - » Neither as copy nor as citation
 - Full evidence: Returned to owner/court or archived
 - Copies from the court file



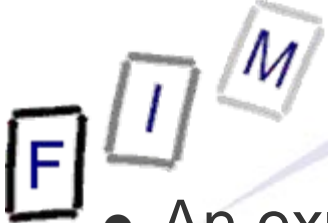
Tips for reading/writing

- First: Check whether questions fall in your area of expertise
 - You can ask for another expert to complement you or decline
- Keep it short and simple: No scientific explanations or backgrounds for the approach used
 - But in oral examination you should be able to do this!
- Do not discuss whether one witness is more believable than another → Provide alternative results for both versions
 - The judge must decide whom to believe!
- You should answer the questions from your own past experience or from experiments
 - Citing literature is insufficient!
- Keep the costs in mind
 - Private expertise: Contract
 - Court expertise: Upper limit (rules for extension etc.)



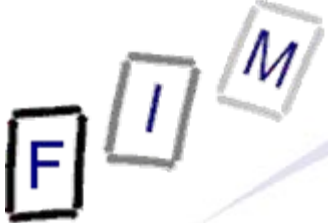
Tips for reading/writing

- Never ignore/change/minimize the importance of facts, because they do not fit your explanation
 - No conclusion is better than a wrong one (liability!)
- Keep it short and simple
 - To be read by non-experts with precious time
- Add “interactive” elements to the pure text
 - Graphics, photographs, drawings, videos etc.
 - » They are often much better suited than a written description!
 - » Electronic delivery of an expertise should be no problem today
- Do not criticize the law or provide solutions to their problems
 - You should assess this solution, not build another one!
 - » Exception: “What can be don’t to remedy the problem?”
- Never show sympathy or antipathy to any party
 - This is typically ground for removal
 - » Impartiality must not only exist; it must also look like it



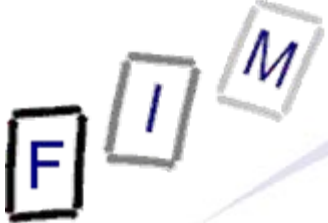
Tips for reading/writing

- An expert has no executive power
 - If a party refuses access to facts (e.g. computer or data), you can **solely** inform the judge
 - » Private expertise: No possibility at all against third parties!
 - The judge **may** then order the police/... to aid you!
 - Austria: You may request witnesses to appear and ask them
 - » But if they don't appear, keep silent etc. → See above!
 - There is no sanction either!
- Keep exact records of all activities (start & end time, equipment & personnel, activity): Invoice!
- Never contact only one party
 - **Every contact must always involve all parties**
 - » Includes letters (→ send registered!), E-Mails (→ CC), ...
 - » Investigations at one party: Other party must have possibility to participate (= be present)
 - If they have an attorney → You **must** contact him/her!



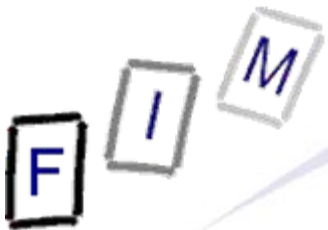
An expertise in court

- Rules vary in each country → Very general ones here only
- Typical elements of experts in court:
 - Explanation of their qualification (curriculum vitae)
 - » Previous experience with expertises
 - » Academic titles, “fame” in science/profession
 - » Practical experience in this area
 - Reading their expertise (almost always omitted)
 - » Often only a brief summary of facts, methodology and results
 - Questions regarding their methodology and results
 - » Usually based on another private expertise
 - » Justification why not using a different method
 - » Whether another expert may ask questions (directly/indirectly) varies widely (but in some way it is always possible)
- Attention: Lawyers are trained in rhetoric!
 - Surprise questions, pressure, etc. often occur!



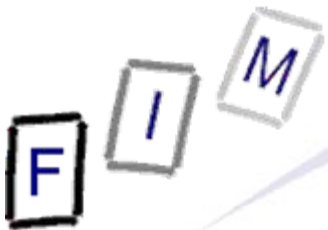
Common attacks on experts/expertises

- “He/she is not qualified”: Works almost never!
 - Attention: You may work only in your area of expertise; if this is exceeded the attack is almost certain to be successful!
- “Something was ignored”: Some fact/measurement is missing, which would alter the results
- “There exists a different methodology”: Which might be newer, better, more validated, ... or not
- “Contradictions exist”: This is typically a serious problem!
 - If not in the written expertise, then they may try to lure you into some through questions and rhetoric
- „Alternative explanation“: Suppose some other facts, the result would be different
 - You need to prove that these facts did not (measured)/could not have (conclusions from other measurement) occurred



Exemplary structure: Analysis of some damage

- What has been damaged in which way?
- What was the cause for the damage?
 - Possible/impossible/probable/real cause
 - Would damage have occurred if the cause did not happen?
 - Is cause suitable for the damage in abstract/general way?
- In whose area did the cause occur?
- Has this person ignored an obligation?
 - Which/what did the person instead/why obliged
 - What is the objective carelessness?
- Can this person be reproached for this?
 - Knowingly ignored/required care ignored/could he have know the result and that it would occur?
- Would the damage have occurred if this person had fulfilled the obligation and performed carefully?



Exemplary structure: Analysis of some damage

- Did the injured also cause the damage?
 - Can this person be reproached for this and why?
- If yes, which part of the cause is his?
 - Who could have prevented the damage more easily?
- What is the amount and extent of the damage?
 - What damage did occur and what will occur in the future?
 - » Certainly, probably, perhaps?
 - Can the damage be repaired and how much would this cost?
 - How large is the reduction in value for the damages which cannot be repaired?

Note: This is the full program – Only look into those parts requested by the court/client!



- Be careful when writing an expertise
 - Important limits: What you may/should do
 - Private expertises must be impartial as well
- When reading expertises: Read between lines
 - What was the exact question?
 - » Private expertises: “Steering” the result often through this!
 - What was not mentioned?
 - What alternative explanations/methods do exist?
- Assessing an expertise
 - You show be knowledgeable about the subject area
 - Any doubtful methods? Conclusions valid for facts?
 - » Alternative explanations?
 - Through a different area of expertise (e.g. influence of the activity of the sun on computers)?

F I M

Questions?

Thank you for your attention!