# Using inspections for building a house

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In 2004 I was involved in a software development process enhancement project and we decided to create a sub-project for enhancing the software specification process. Some developers[1] were able to get some budget for having Tom and Kai Gilb on site and as a tester I was fascinated from the method to detect defects before any line of code have been written. The problem was (and in some development companies it is fact also today!) that software specifications have been produced to have some paper to legitimate code work and not for using it as blue-print, as a **communication paper in a team for their work**.

There was a time in my life such documents have been used for **communication** – in the food industry. Without a specification of the
   * production line-setup
   * the product
   * the people resources
   * …
you need for the machines, the quality levels you need to reach, etc. **you won't start a** food producing **process** where +20 people are working on. Tom and Kai awoke a process in my thoughts how to get the software more "quality approved" like products in the "traditional" industry.

In that time my wife and I decided to buy a house – a **blueprint from a house**... We have decided to build a new house to avoid too many compromises we would have if we would buy a used one.

One day she saw some advertising in our home town and we visited the place where the nine houses will have been build. It is a beautiful place and we entered in negotiations with the house vendor, a bank regulated under public law.

As we got the technical specification I thought about how to know how good the quality of the document is. The contract needs to be nearly perfect if you later want to have fewer corrections.

**The most expensive project in my life!**

I remembered the inspection method for reviewing specification documents and divided it into sections before I started.

## 1st part – The technical specification

The technical specification [SEG01] was full of inaccuracies and I have found many potential defects per logical page – I didn't make a distinction between major and minor defects because every defect would be one which I would see in the next 30 years. I arranged a meeting with the construction manager in the container in front of the place where the houses should be built.

As he saw the page with all the red marks he was not very amused. I tried to get every inaccuracy exchanged by a measurable definition. For example: There is a sentence about the water reservoir

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1 Developers are - I have learned from Janet Gregory and Lisa Crispin in "Agile Testing" - all people in a [software] project because all putting their work together to develop a product – not just the hackers, code developers... Great definition.

and that it has to be "fairly dimensioned" - fairly? The rainwater pipe should be there and the material was named but the diameter was not named. Have you ever slept nearby a rainwater pipe which was not "fair dimensioned" and the rain was more than expected? The water swoosh would hinder you to sleep, promised!

As we finished the house building the construction manager said to me that the beginning of the contact was stressful but there were no ambiguities after the work had started. He was right. We removed these things before one stone has been put at his final place.

## 2<sup>nd</sup> part – The lawyer part

In about 20 pages I didn't understand more than one completely – lawyers and their vocabulary and Grammar is in all language a horror trip! I made a contract with a notary and advocacy and was lucky in selecting the right one: She was the lawyer as the public ground has been sold to the bank and have explained me exactly the history of the complicated contract. Hey, no inspection needed – it has been done by her and was cheap. She said that there are some sentence not well because just collecting defects while the approval would make no sense – collecting them and give it to a 3<sup>rd</sup> party build censor would make more sense. The invoice would have to be payed by the party who was wrong. Good. Also the final date should be more exact defined: Three whole calendar months before the house will be ready the builder should inform us instead of six weeks which was in that contract. Why? Well, in Germany you have to cancel rents to the end of a month and six weeks would be within a calendar month. Saved also money to correct that and to be unambiguous....

## 3<sup>rd</sup> part – The agile development

As the agile methods came over to the software business I was smiling. I have learned my lessons in the food industry and there the potential defect rate needs to be zero if your customers are children in the age of five. There is no way to "fix it later" (most used sentence in software development?) if a child has a fish stick in his gullet with a too large fish bone.... So, the quality checks were always at the beginning where the greenware arrived, in the production and at the end to get the approval. We have tested the products all over the whole business day to be able to stop production or change parameters to get the product in the range of the specification. The specifications were absolutely measurable and well tested in pre-production – yes, prototyping has been used for every new product and if you need new machines there was (and is) no way around it.

Back to my house building: I was **every day available** for the builders and the foreman. The successful build depends on the foreman and that you are available for him! Same in the industry I have learned my lessons: A good line leader is needed to get the products in a high quality done in time.

Every day I checked the ongoing process and validated it against the technical specification. If there was a difference I talked to the foreman and we found a solution – always he has good suggestions and he demonstrated us different solutions for our bath. He found in discussion with my wife a great solution and removed our biggest concerns.

So, agile development is not a buzz word and inspections also been used mechanically in other industries and parts of our life.

Inspections I used successfully in building our house and I am using it also today for every technical document at work which will affect the quality of the team, the company or myself.

[SEG01] German technical specification – more a "design" document for the houses – http://seg-holstein.de/50-0-baubeschreibung.html – S-Erschließungsgesellschaft Holstein mbH & Co. KG (2005)

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