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Document Version

Final published version

[Link to publication record in Manchester Research Explorer](#)

Citation for published version (APA):

Besaiso, H., Wright, D., Fenn, F., & Emsley, M. (2016). A Comparison of the Suitability of FIDIC and NEC Conditions of Contract in Palestine. In *The Construction, Building and Real Estate Research Conference of the Royal Institution of Chartered Surveyors* (The Construction, Building and Real Estate Research Conference of the Royal Institution of Chartered Surveyors). <http://www.rics.org/uk/knowledge/research/conference-papers/a-comparison-of-the-suitability-of-fidic-and-nec-conditions-of-contract-in-palestine/>

Published in:

The Construction, Building and Real Estate Research Conference of the Royal Institution of Chartered Surveyors

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A COMPARISON OF THE SUITABILITY OF FIDIC AND NEC CONDITIONS OF CONTRACT IN PALESTINE

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ABSTRACT

Construction disputes are a classic topic in the project management scholarship and a plethora of research has been published seeking more understanding and better treatment for this endemic disease. The extant literature includes a growing body of scientific inquiry investigating the role of contracts in dispute materialisation as well as minimisation. This research sets out to critically review the role of standard forms of contract, and in particular to compare FIDIC with NEC, as they are among the most popular contracts in the world. The main aim is to evaluate the effectiveness of FIDIC and NEC in reducing disputes in the Palestinian construction industry. The critical review reveals that contracts may minimise disputes and NEC appears to be more capable than FIDIC to do so. However, an industrial perspective is to be explored to examine the extent of improvement, if any.

Keywords: disputes, FIDIC, New Engineering Contract, Palestine, standard forms of construction contract.

INTRODUCTION

In Palestine, there is a perception that disputes in the construction industry is increasing (Enshassi *et al.*, 2009; Abu Rass, 2006). These disputes lead to time and cost overruns and may damage the client-supplier long business relationship (Fenn, 2007). One of the top factors which creates disputes in the construction industry is the standard form of construction contract (Fenn *et al.*, 1997).

FIDIC is the most widely used international form of construction contract in the world (Seifert, 2005), and Palestine is no exception (Murtaja, 2007). Likewise, the usage of NEC in the UK and 30 other countries in the world is an indicator of its increasing popularity (Thompson *et al.*, 2000). One of the significant features of the construction industry in Palestine is the dependence of many infrastructure and construction projects on international funding organisations (Enshassi *et al.*, 2006). Many donors and organisations financing construction projects in Palestine use FIDIC for their projects, such as the World Bank, the Asian Development Bank, the Islamic Bank for Development, the European Commission and different United Nations bodies. Yet, some of these organisations are testing the potential usage of NEC instead of FIDIC in their projects. For instance, the Asian Development Bank and the UK's Overseas Development Agency are testing replacing FIDIC by NEC for their sponsored projects (Ndekugri and McDonnell, 1999). The above-mentioned points justify the choice of FIDIC and NEC contracts in this research.

In the next section, six aspects of FIDIC conditions of contract are compared and contrasted with those of NEC. These aspects have been derived from the literature review carried out on the two contracts in addition to the review undertaken on the sources of disputes in the construction sector of Palestine. The extant literature identifies the sources of disputes in the construction sector of Palestine.

The top factors in the list include disputes arising from misunderstanding and misinterpretation of contract conditions written in English, and onerous terms (i.e. unfair risk allocation) (Enshassi et al., 2009; Murtaja; 2007; Enshassi, 1999), variation orders (inclusiveness of prices i.e. definition, valuation, slow approvals) (Abedmoussa 2008), the lack of trust between contractors and engineers (Saqfelhait, 2012) that creates an adversarial environment in which one of the most important factors determining bid-no-bid and mark up decisions are "project consultant" (Enshassi et al. 2010) in addition to the endemic volatile and unstable political environment (e.g. as borders' closures, blockade, and hostilities) that leads to cost and time overruns (El-Sawalhi and El-Riyati 2015; Enshassi et al. 2009).

FIDIC Compared and Contrasted with NEC

This comparison is neither clause-to-clause nor is it claimed to be exhaustive and encyclopaedic. However, it concentrates on the most important aspects and key comparative and contrasting issues that normally give rise to disputes, as inferred from the extant literature. For each point of comparison, the advantages and disadvantages of both contracts are highlighted. These issues can be examined further with reference to the FIDIC and NEC documents themselves. This provides useful insights into any gaps or weaknesses in the contracts' provisions, and which contract is better in terms of dispute minimisation.

Clarity and Simplicity

Chong and Zin (2009) argue that one of the main causes of disputes is misunderstanding and misinterpretation of contract clauses and the preventive solution lies in the use of plain English. Clarity is important to ensure that all parties of a contract understand what they are getting themselves into, their rights and obligations, and the risk apportionment and thus what risks they bear.

FIDIC has been criticised for using obscure, complicated, inscrutable and legal language that has phrases traced back to contracts of the 19th century in England (Broom and Hayes, 1997). In addition, FIDIC's poor layout, long sentences and substantial cross-referencing makes it difficult to understand (Cutts and Maher, 1986; and Wydick, 1978). Nevertheless, it is important while reviewing these critiques to consider their time context, as they were written prior to or just after the release of FIDIC 1987. It is worth mentioning that one of the objectives behind drafting the FIDIC 1999 Rainbow edition was to simplify the language. However, it is uncertain whether FIDIC has been completely successful in this aim. Definitely, FIDIC has been improved much from its earlier editions and has moved towards fewer clauses and clearer language and contract structure, but the real judgment is left to its users. Indeed, this area is a worthwhile investigation for further research.

NEC is different from FIDIC as one of its three declared objectives is to minimise the

incidences of disputes arising from unclear language. NEC uses non-legalistic ordinary unequivocal language, straightforward, simple and plain English, short sentences (with no more than 40 words), a bulleted structure and avoidance of confusing cross-references. Also, there are guidance notes and flow charts to assist in the understanding and the application of the contract ([Eggleston, 2006](#); [Gould, 2007](#); [Li, 2006](#)). The abandoning of "legal language" is a revolutionary step by the NEC drafters which is much debated. The drafters claim that they sacrificed legal concepts in the interests of better management of projects. This makes the language more understandable to builders at site level ([Lavin and Potts, 1998](#); [Li, 2006](#)). Moreover, it saves time and money paid to lawyers to translate the contract to legal phrases, and then translate it back to users so they know what it means ([Abrahamson, 1979](#)). On the other hand, the main criticism of this approach is that it discards the accumulated contractual wisdom of generations, reinvents the wheel and reduces the legal certainty which could increase the chance of contractual disputes ([Eggleston, 2006](#); [Valentine, 1996](#)).

To sum up, the research acknowledges that NEC is not perfect, but it is a considerable improvement in clarity compared to FIDIC. Indeed, what is required to avoid disputes is clear English, and certainly not a long history of case law and judicial precedents on a particular clause or phraseology. To avoid disputes in the first place, people at site level should be able to understand the conditions, and not need to memorise a dozen cases about particular clauses.

Risk Allocation and Management

It is inherent for any project, particularly in the construction industry, to involve risks. It is not possible to eliminate all risks, but what can be done is to allocate the risks to the various parties who then manage them ([Kozek and Heberd, 1998](#)). The standard forms of conditions of contract provide a framework to regulate the process of risk allocation by defining the rights and obligations of both parties.

Both FIDIC and NEC attempt to allocate risks fairly and reasonably between the employer and the contractor ([Ndekugri and McDonnell, 1999](#)). The basic principle to achieve this is by allocating the risk to the party best able to control and manage the risk event and bear the risk consequences ([Bunni, 2005](#); [Eggleston, 2006](#); [Potts, 2008](#); [Williams, 2001](#)).

FIDIC is based on the principle of balanced risk sharing and has been widely accepted by employers and contractors as a reasonable compromise ([Bunni, 2005](#); [Osinski, 2002](#)). The employer bears only the risk of unforeseen negative conditions that are not offset by unforeseen positive conditions. This means there is less chance for contractors to get time extensions and cost compensation for unforeseen events since they have to be unforeseen, and if they are, they need to be offset by other favourable conditions. At first glance, FIDIC's new philosophy of "conditions-balancing" seems fair, equitable, and desirable and similar to pain/gain of partnering arrangements. However, it potentially increases disputes because it provides the parties with more things to argue about, which could be costly and impossible to settle ([Swiney, 2007](#)).

Unlike FIDIC, NEC recognises that the standard form should not only be a mechanism for risk allocation, but also for a proactive and dynamic risk management. NEC acknowledges that an important part of risk management is effective

communication between the parties. This includes risk registers, risk prevention, early warning and risk reduction meetings (Wassenaer, 2009).

Apparently, NEC has been more successful than FIDIC in expanding standard forms' role towards risks. NEC manages risks proactively and dynamically, and, unlike FIDIC, is not only concerned about risk allocation.

Force Majeure and Prevention Events

Force majeure events are of a great importance, particularly under the unstable conditions in Palestine. The legal definition and interpretation of the events may vary from country to country, and from one jurisdiction to another, which will accordingly lead to different legal consequences. Therefore, most standard forms, including FIDIC and NEC, cover these matters by express terms ([Eggleston, 2006](#); [Jaeger and Hök, 2010](#)). FIDIC clause 19.1, defines *force majeure* events to be:

- beyond a party's control,
- could not reasonably be provided against before entering into the contract,
- having arisen, could not reasonably be avoided or overcome, and
- are not substantially attributable to the other party.

Indeed, clause 19.1 provides a non-exhaustive list, including events such as war, terrorism, riots, and natural disasters. The above definition of a *force majeure* event is entirely open-ended, such that a human-caused event would be covered if it met the above criteria. This gives more risk to the employer as he bears the cost and time impacts (Swiney, 2007). Jaeger and Hök (2010) criticise the ambiguity of the extent of the contractor's entitlement to an extension of time, and loss and expense, as to whether it covers direct and indirect consequences of the event. It is worth mentioning that a *force majeure* event does not need to pass the "unforeseeability" test. This means even if an event is foreseeable, it will be considered *force majeure* as long as it is beyond the control of the parties ([Jaeger and Hök, 2010](#)).

NEC 3 has introduced a new clause (clause 19.1) called "prevention" under which the employer bears the time and cost risks of events similar to, but potentially wider than, *force majeure*. Clause 19.1 defines a prevention event as an event which:

- stops the contractor completing the works, or
- stops the contractor completing the works by the date shown on the accepted programme, and
- neither party could prevent, and
- an experienced contractor would have judged at the contract date to have had such a small chance of occurring that it would have been unreasonable to have allowed for it

[Eggleston \(2006\)](#) criticises this clause as it opens the door for a very wide interpretation because its definition goes well beyond what is adopted in law as "*force majeure*". For instance, a contractor may argue that insolvency of suppliers or the supply of defective materials, works and designs by others had a small chance of occurring and could not have been prevented by either party. He also critiques the words "small chance" and "unreasonable" which are difficult tests to examine in dispute resolution proceedings, and would indicate the event to be one of

"prevention" even though it was foreseeable, the same as FIDIC. Furthermore, the "prevention" clause seems to apply to delay events which are endemic and it does not make sense that the clause operates for each and every delaying event ([Eggleston, 2006](#)).

To sum up, both FIDIC and NEC share the same philosophy of transferring the risk of *force majeure* events to the employer to avoid padding the tender prices by contractors. It appears that both FIDIC and NEC fail to provide a decisive and conclusive definition of what constitutes a *force majeure* or prevention situation. The problem with the *force majeure* definition is that people do not know what might happen so they always struggle to define it. This could cause disputes as a notice of *force majeure* would be rejected by the defendant denying the existence of this event, and in turn suing the claimant or plaintiff for a breach of contract. Bunni (2005) states that not covering these exceptional events in the conditions of contract, and leaving them to the applicable law in the relevant jurisdiction would reduce the likelihood of conflicts. However, not covering them at all will make the resort to litigation inevitable, which is not desirable. Hence, it can be argued that what is needed and recommended is to improve the certainty of meaning of a *force majeure* or prevention situation in order to avoid disputes.

Physical and Weather Conditions Risks

Unforeseen physical obstructions are inevitably encountered in major construction projects. Simply, this is because it is impossible to cover every square metre of the site with geotechnical testing ([Potts, 2008](#)). If an unforeseeable event occurs, which the contract does not provide for, the inevitable outcome will be a dispute. Despite the good faith efforts of the parties, disagreements will occur over who bears the time and cost consequences of such an event (Omoto, 2002). According to Seppala (1991), "unforeseen conditions and obstructions" are the first major area giving rise to claims under FIDIC. In the following paragraphs, the philosophies of FIDIC and NEC regarding the risks of ground and weather conditions are compared.

There is a fundamental difference between FIDIC and NEC approaches as regards the employer's obligation to provide the contractor with site information. FIDIC obliges the employer to provide the contractor with the available data about the site, but not to carry out soil investigations nor to interpret these data. NEC, in line with the position of English Common law, provides no such obligation to avoid any potential disputes in case of error about the employer's liability of its accuracy, breach of warranty, misrepresentation or negligent misstatement (Ndekugri and McDonnell, 1999). The contractor's duty to inspect geotechnical conditions is relatively the same under the two contracts, but NEC tends to minimise it. However, it is uncertain whether the contractor is required to make full geotechnical tests in both contracts (Ndekugri and McDonnell, 1999).

Both contracts try to adopt equitable risk sharing principles in respect of the ground conditions. Ultimately, the employer will bear the additional costs when the physical conditions and obstructions are "*unforeseeable for an experienced contractor*", according to FIDIC, or have a "*small chance*" of occurring, according to NEC. Apparently, FIDIC uses a "*foreseeability*" test while NEC uses a "*probability*" test to allocate risks, which could be argued to be slightly different approaches (Eggleston,

2006; Ndekugri and McDonnell, 1999). Some terminologies such as “*experienced contractor*”, “*physical conditions*” and “*foreseeable*” in FIDIC, and “*small chance*” in NEC have been criticised because they are uncertain in meaning and subjected to a range of interpretations (Ndekugri and McDonnell, 1999). In addition, FIDIC's foreseeability test is only undertaken after the occurrence of the event. This retrospective investigation or hindsight is not the best way to understand the time context of the past in order to determine what was foreseeable and what was not.

To avoid disputes, Bunni (2005) maintains that a construction contract should not allow contractors to gamble on encountering more or less favourable ground conditions, a practice which could lead to excessive gain or loss. Gambling could be avoided if extensive geotechnical tests were done. Because there is not sufficient time and benefit for contractors to initiate these tests, FIDIC resolves these dilemmas by granting proper time and cost compensation should the unexpected event happen. To avoid disagreements over whether the event is expected and foreseeable, Bunni (2005) proposes to incorporate into the tender documents a "referenced list of adverse physical conditions" to be the basis of remuneration. This proposition tends to move the FIDIC approach towards NEC's compensation events list in dealing with physical conditions. Unlike FIDIC, the procedure NEC uses to resolve physical conditions issues once they have appeared are structured and systematic, and enhances cooperation to minimise their effects (Ndekugri and McDonnell, 1999).

Both contracts limit the situations under which the contractor is entitled to be compensated based on weather conditions. FIDIC allows for an extension of time only for “*exceptionally adverse climatic conditions*”, while NEC allows for costs and/or time claims for weather conditions which occur on “*average less frequently than once in ten years*” (Ndekugri and McDonnell, 1999). Obviously, NEC uses more precise terms than FIDIC and includes an objective and statistical approach rather than FIDIC's subjective judgment to determine whether the conditions are "adverse" and "exceptional" (Barrett, 2003). However, the NEC approach of allocating the cost and time impact of weather conditions to the employer seems illogical and unfair since the employer has no control over the situation (Eggleston, 2006).

In brief, both FIDIC and NEC adopt the same orthodoxy that it is better for employers to bear the responsibility of unforeseen conditions and pay for what did happen, rather than what the contractors thought might happen. This approach places the risk with the party best able to influence the risk, who is the employer in the case of ground conditions; it is his site and he can commission intensive soil investigation (Eggleston, 2006; Seppala, 1991).

Although both contracts have good features regarding physical and weather conditions risks, a combination of these features would lead to a better approach. Rather than debating which party should bear the physical conditions risk and the meaning of ambiguous terms like "foreseeable" and "small chance", it is better to carry out full geotechnical tests and specify precisely which party is responsible for ensuring this occurs.

Variations

According to Seppala (1991), the inevitable variations are the second major area giving rise to claims under FIDIC. FIDIC is unable to cope with significant variations

because it is essentially a re-measurement contract that assumes the project scope is well defined prior to letting the tender documents. FIDIC Sub-clause 12.3 limits variations of items to 10% by quantity and other criteria which necessitate new rates to be agreed (FIDIC, 1999). The process of determination of the new rates, whereby a contractor submits a proposal and then the engineer determines suitable prices, is a rigorous and tough process that inevitably will lead to disagreement and dispute.

FIDIC details that a change is to be valued at the same or by considering rates and prices set out in the contract, or the engineer agrees new suitable rates and prices through the procedure of "due consultation" with the employer and the contractor. If no agreement is reached, the last resort is determining the appropriate prices by the engineer. This procedure assumes that the value will be calculated after the variation or change has been carried out (FIDIC, 1999; Forward, 2002).

On another hand, FIDIC introduces a new innovation allowing contractors to initiate variations under a "Value Engineering" clause. The contractor may submit a proposal, which needs the approval of the engineer to proceed, to increase efficiency, reduce cost and time etc. to the benefit of the employer (FIDIC, 1999). Obviously, this feature encourages collaboration and partnering, and it should have been introduced within NEC.

Normally, standard forms make it clear via express terms that the contractor is obliged to perform variations. NEC does not recognise the phrase "variations" or "changes", but addresses them indirectly through Clause 14.3 (Instructions) which serves as the variation clause (Eggleston, 2006). Although there is no explicit limit to changes, Clause 12.3 tends to limit them by stating that no change to the contract has effect unless it is provided for in the conditions of contract or unless it has been agreed, confirmed in writing, and signed by the parties (Eggleston, 2006).

NEC provides for pre-pricing a variation/change before it is carried out. This means that the instruction - variation order or change order - by the client will at first be an instruction to submit a price (quotation) for the work, which, if accepted, will be followed by an instruction to carry out the work (Eggleston, 2006). This is beneficial for both parties. The client can decide whether to go ahead or not based on the price. The contractor ensures the price of the work is accepted and thus avoids disputes. Yet, the drawback of the NEC system could be a delay in reaching an agreement on the price, and in turn a delay to the project activities.

In summary, FIDIC tries to avoid disputes by minimising variations to a certain limit after which a new process should be agreed. However, the process of price determination is still problematic. On the other hand, NEC is very flexible as it does not limit variations, but it requires pre-pricing and quotations that fix the prices before commencing the variation. Overall, it is obvious that both use different approaches to tackle the same problem, but NEC tends to be more successful, as what really does matter, at the end of the day, is price agreement and not the 10% limit on quantity or some other constraint.

Project Organisation (Engineer versus Project Manager)

The aim of this section is to critically examine and compare the role of the engineer

under FIDIC with the project manager under NEC.

Under the FIDIC's old Red Book, the engineer has two main duties. Firstly, he is the employer's agent for design, supervision of the works' construction and execution, and contract administration. Secondly, he is a neutral and independent third party responsible to decide and determine the contractor's claims for additional payment or extensions of time, and to resolve disputes fairly between the contractor and the employer (Seppala, 1991).

The employer is responsible for the engineer's default in the first group of duties and in turn may be in breach of contract, but he is not responsible for the engineer's performance in respect of the second group of duties, except in the case of total failure to perform these duties. The duality of role of the engineer as the employer's agent and a neutral third party is much criticised because of the conflict of interests in his duties. For example, the engineer may be the cause of problems like design errors and delay in making decisions. Moreover, he is appointed and paid by the employer and may seek future work with him, or at least avoid being sacked (Ndekugri *et al.*, 2007; Seppala, 1991).

NEC resolves these problems by splitting the engineer's role into four entities; the project manager, supervisor, designer, and adjudicator. All these roles are agents of the employer except the adjudicator. The project manager is required to make the plans, administer the contract, certify and value payments etc. The supervisor is concerned with the quality of works and defects. Those two roles can be combined and occupied by one person (Eggleston, 2006). It is important to keep in mind that the new roles of the engineer under NEC, compared to other forms, would encourage engineers not to recommend such a standard form that considerably reduces their own authority and workload (Lavin and Potts, 1998).

The project manager is the representative of the employer and works on his behalf. There is no express requirement on NEC provisions obligating the project manager to be impartial. However, some routine tasks and activities such as issuing certificates, and valuing compensation events seem to require impartiality and fairness. As a certifier and valuer, the project manager shall not work to secure the employer's interests. This was emphasised in the unusual case of *Costain Ltd and Others v. Bechtel Ltd* (2005), in which the judge made the decision that the project manager's duty is to act fairly and impartially when acting as a certifier (Eggleston, 2006). This case shows that the role separation is not as simple as appears on the face of it.

Under the new Red Book, there is an attempt to abandon the "independent engineer" concept. This appears from three changes: removing the requirement to "act impartially", expressly stating that the engineer is to act as the employer's agent, and introducing the Dispute Adjudication Board (DAB) to which the parties may refer any dispute. It is important to view the development and changes of the contract holistically. The non-neutral engineer and DAB are closely related and have been introduced as one package (Swiney, 2007). Certainly, this has significantly reduced the dispute resolution role and power of the engineer (Ndekugri *et al.*, 2007).

The total abandonment of the "independent Engineer" concept is questioned since it replaces the duty to "act impartially" by the duty to make "fair determinations" of the claims between the employer and the contractor, which appears to reinstate the old

concept. However, a new mechanism to allow the employer to regain control over the engineer is introduced in clause 3.1. This is achieved by stating that the engineer is to act as the employer's agent in the Particular Conditions. Furthermore, unlike the old Red Book, the new Book empowers the employer with express authority to replace the engineer for any reason whatsoever, subject to two procedural requirements (Ndekugri *et al.*, 2007).

Lina (1997) argues that although the dual role of the engineer should be abandoned, the new FIDIC and NEC approaches are less efficient than the traditional system. For instance, the NEC approach of separating the duties of the engineer to multiple people or firms ignores the consistency gained by one party working over the whole project life cycle from project inception to completion. Also, the engineer's knowledge of the project's day-to-day activities enables him to make decisions better than the DAB or adjudicator. In addition, the interference of the DAB or adjudicator may create a confrontational rather than a cooperative environment and in turn increase claims, especially as the engineer no longer has an obligation to act impartially. Finally, the additional fees payable to the DAB or adjudicator make the works more expensive (Lina, 1997).

Summarising, the new Red Book has moved towards the NEC approach to dispose of the independent engineer concept. However, FIDIC has not gone all the way because the duality of engineer's role has not been eliminated completely. Arguably, this is favourable as the new Red Book is structured flexibly enough to serve the requirements of different parties (Ndekugri *et al.*, 2007).

CONCLUSION

This study sets out to examine and evaluate the role of the standard form of contract, FIDIC or NEC in particular, in dispute minimisation. The main results and findings of the critical literature review suggest that both contracts have commendable and desirable features for all parties and can be used successfully anywhere. However, there are certain areas of concern and sometimes limitations in both contracts.

NEC has probably many advantages over FIDIC particularly in clarity, risk management, objective measurements of weather and ground conditions risks, and variations. The authors argue that these advantages or benefits are for all parties to a construction contract because disputes minimisation is a matter of mutual interest. For example, a clear contract that includes a clear risk allocation and a clear procedure to follow in case of variations is expected to leave no room for disputes, at least in theory because clarity is a relative and not an absolute concept. Likewise, it is better for all parties to allocate the risk event to the party best able to control and manage it and bear its consequences. However, the authors acknowledge that gap between academics/theoreticians and practitioners who appear to be disbelievers in this argument and hence get involved in amendments to the carefully-written standard forms to shift the risks down the supply chain.

The position of the engineer/project manager has benefits and limitations in both contracts; however, it seems the project manager role under NEC is more sensible in Palestine. This is primarily because of the adversarial relationship and lack of trust between contractors and engineers, as shown in the literature, which makes it more reasonable to separate the impartial and neutral role of dispute adjudication from the

supervisory and contract administration role in which the Engineer works as the client's agent.

On the other hand, FIDIC has the advantages of familiarity and precedence, widespread popularity, and endorsement by many governments, development banks and institutions, and major employers worldwide. The force majeure or prevention provisions are inconclusive in both standard forms, a challenge that arise from the inherently uncertain nature of these events.

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