

Liebe GLD-Mitglieder!

von Frieda Ruppenner-Lind, *GLD Administrator*

Inzwischen sind wohl alle aus dem Winterschlaf erwacht, falls es den tatsächlich gegeben hat. Wie ich von vielen Kollegen erfahren habe, gab es auch in dieser sonst etwas geruhsameren Jahreszeit genug Arbeit, was man auch aus der GLD-Liste ersehen konnte, die mit ihren Terminologiefragen und den vielen Antworten beinahe so eine Art Barometer für die Auftragslage darstellt.

Wo wir gerade von Auftragslage in unserem Beruf reden, möchte ich noch einmal auf die Umfrage zur Einkommenssituation freiberuflicher Übersetzer und Dolmetscher zurückkommen, die der ADÜ Nord bis zum 31. Januar durchgeführt hatte. Da auch viele GLD-Mitglieder an der Umfrage teilnahmen, wird es Sie vielleicht interessieren, dass die ersten Ergebnisse zum Abschluss der ADÜ-Nord-Konferenz in Lübeck am 10. April bekannt gegeben werden. Mehr oder weniger gleichzeitig wird eine Zusammenfassung (max. 4 Seiten) mit dem April-Infoblatt des ADÜ Nord erscheinen und als PDF-Datei auf der Internetseite des ADÜ Nord (<http://www.adue-nord.de>) zum Download bereitstehen. Diese Ergebnisse sind allgemein zugänglich und nicht kostenpflichtig. Die ausführlichen Ergebnisse erscheinen im Spätsommer 2005 als Sonderband (Broschüre) und davon werden ca. 20 ausgewählte Verbände und Organisationen, zu denen auch die GLD gehört, je ein Gratisexemplar als Anerkennung für die Unterstützung bei der Umfrage erhalten. Aus diesem Band darf im angemessenen Rahmen zitiert werden.

Aufgrund der Bemühungen der bisherigen GLD-Leitung, Verbindungen mit dem BDÜ in Deutschland anzuknüpfen, ist es zu einem ersten Kooperationsangebot gekommen. Der BDÜ ist bereit, GLD-Mitgliedern, die selbst nicht Mitglieder des BDÜ sind, die Gelegenheit zu geben, die Verbandszeitschrift „MDÜ“ zum Preis von 50 EUR für das Jahresabonnement zuzüglich Versandkosten zu bestellen. Der BDÜ schlägt vor, die Zeitschriften „en bloc“ direkt von der Druckerei an eine noch zu bestimmende Adresse zu senden, von der aus sie dann innerhalb der USA weitergeleitet werden können. Wenn sich genügend Interessenten melden – eventuell 20-30 –, dann würde sich das lohnen. Außerdem werde ich in nächster Zeit noch herausfinden, ob eine PDF-Datei anstelle der gedruckten Ausgabe abonniert werden kann. Wer Interesse an dieser Verbandszeitschrift

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interaktiv

The newsletter of the German Language Division (GLD) is a quarterly publication within the American Translators Association.

Opinions expressed in this newsletter are solely those of their authors. Articles are subject to editing. Submissions for publication are invited and may be mailed, faxed or e-mailed (the latter preferred) to the editors.

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hat und sie gern abonnieren möchte, kann sich gern bei mir per E-Mail unter der hierfür eingerichteten Adresse frlxlator@gmail.com melden und bitte „MDÜ“ in die Betreffzeile eingeben.

Die Planung für die Konferenz in Seattle läuft bereits auf Hochtouren und wir werden uns bemühen, auch in diesem Jahr wieder ein anspruchsvolles Programm zu bieten. Wir sind dank der Bemühungen von Jutta Diel-Dominique im Begriff, einen Experten auf dem Gebiet der Produkthaftung in den USA und deren Implikationen für deutsche Unternehmen als Gastsprecher für ein dreistündiges Seminar und einen Vortrag einzuladen. Dazu haben wir zusammen mit der Interpreters Division noch eine Diplom-Dolmetscherin aus Österreich eingeladen, die auch auf diese Sparte unseres Berufs eingehen wird. Außerdem habe sich einige GLD-Mitglieder bereit erklärt, Vorträge wie über die Erstellung von Websites und andere Themen zu halten. Wir freuen uns ganz besonders über diese Beteiligung aus unseren eigenen Reihen und hoffen, dass sich auch andere dadurch ermutigen und anregen lassen!

Diese Ausgabe von *interaktiv* wurde unter der tatkräftigen Mithilfe von Roland Grefer erstellt, der Rainer Klett als neues Mitglied des *interaktiv*-Redaktionsteams unterstützt. Ich hoffe, Sie finden die Artikel interessant und hilfreich. Sie umfassen Themen, die viele Aspekte unserer Arbeit beleuchten: die geschäftliche Seite, fachspezifische Übersetzungen, Dolmetschen im medizinischen Bereich, Rezensionen von Wörterbüchern, Gedanken über einen GLD-Book Swap und noch mehr.

Wie immer möchte ich Sie bitten, interessante Artikel an die Redaktion von *interaktiv* weiterzuleiten oder selbst einen Artikel beizutragen. Dass Vorschläge von Mitgliedern ein positives Ergebnis haben, lässt sich u.a. dadurch demonstrieren, dass laut Webmaster Michael Wahlster die auf die GLD-Website gestellten Bilder von der Konferenz in Toronto den Verkehr auf unserer Website vervielfacht haben. Nochmals vielen Dank an Inge Noeninger für ihre Initiative!

Mit herzlichen Grüßen

Frieda Ruppenner-Lind



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Perspektiven

Als Übersetzer und Dolmetscher sind einige von uns ständig darum bedacht, unsere Wörterbücher, Software und anderen Hilfsmittel auf dem neuesten Stand zu halten. Aber wir haben alle einmal klein angefangen und uns erst einmal einen entsprechenden Grundstock verdienen müssen. Nicht wenige von uns haben dabei dankend entsprechendes von erfahrenen Kolleginnen und Kollegen angenommen, die zum Teil sogar so nett waren eine(n), unter ihre Fittiche zu nehmen.

Auf den letzten beiden ATA Jahreskonferenzen kam nun jeweils der Ruf nach einer Tauschbörse für Bücher und anderes auf, fiel aber letztendlich den Bedenken vieler zum Opfer, dass ein entsprechendes Mitbringen von Büchern bei der Einreise nach und Ausreise aus Kanada aller Wahrscheinlichkeit nach zu Problemen beim Zoll führen würde. Um derartigen Problemen vorzubeugen und allen GLD-Teilnehmern das Koffer tragen zu erleichtern, hatte ich mich daher auf der letzten GLD-Versammlung bereit erklärt, eine Art Tauschbörse über Yahoo!Groups ins Leben zu rufen. Mittlerweile ist schon ein gutes Vierteljahr ins Land gezogen und ich habe endlich die Zeit gefunden, die Liste einzurichten.

Jetzt ist es endlich soweit ... trara ... eine Weltneuheit ... frisch aus den USA ... genial einfach ... maßgeschneidert auf unsere Bedürfnisse ... we proudly present: The GLD-BookSwap:
<http://groups.yahoo.com/group/GLD-BookSwap>.

Anfangs wurden Bedenken geäußert, dass der GLD-BookSwap zu einer weiteren Diskussionsliste à la GLDList ausufern würde, denen aber recht einfach durch einige organisatorische Maßnahmen das Wasser weitgehend abgegraben wurde. Während es Ziel der GLD-Liste ist, die Kommunikation zwischen den GLD-Mitgliedern zu fördern, anderen rasch und unkompliziert zu helfen, und als Diskussionsplattform zu dienen, liegt der Schwerpunkt des GLD-BookSwap im weitgehendsten Sinne auf Bekanntmachungen.

Wenn wir nach bestimmten Büchern, CDs, Videos, Zeitschriften oder andern Medien suchen bzw. solche abgeben oder veräußern wollen, dann schlägt die Stunde des „Büchermarkts“. Eine kurze Nachricht an GLD-BookSwap@yahoogroups.com genügt, und schon wissen alle BookSwap-Mitglieder Bescheid. Da in diesem Kontext, im Unterschied zur GLDList, der weitere Austausch normalerweise zwischen den jeweiligen Interessenten stattfindet, habe ich die Liste auch entsprechend so eingerichtet, dass Antworten standardmäßig den Absendern zugehen.

Es steht allen GLD-Mitgliedern frei, kostenlos den „Büchermarkt“ zu abonnieren; eine leere E-Mail an GLD-BookSwap-subscribe@yahoogroups.com genügt. Zum Versand einer Mitteilung reicht es dann aus, diese an GLD-BookSwap@yahoogroups.com zu richten. Es wäre schön, wenn dabei einige Konventionen beachtet würden, die helfen, das Durchforsten des Archivs sowie des Posteingangs deutlich einfacher zu gestalten. Viele von uns sind mit Sicherheit bereits eine ähnlich strukturierte Vorgehensweise von Teds Payment Practices (http://groups.yahoo.com/group/pp_dist/) oder von PartnerTrans (<http://de.groups.yahoo.com/group/pt/>) gewohnt.

Und weil es so schön ist, hier also nun in epischer Breite noch eine kurze Beschreibung (was für ein schöner Widerspruch in sich selbst) der Betreffzeile und des Formats der Nachrichten selber. Da wir das Ganze je nach Erfolg auf die gesamte ATA ausweiten möchten, wollen wir der Einfachheit halber die maßgeblichen Keywords gleich in Englisch belassen.

Betreff: ABK, TYPE, Autor, „Titel“, Verlag bzw. ABK, TYPE, Kurzbeschreibung

Wobei ABK eine der folgenden Abkürzungen sein kann:

- ISO (in search of)
- DON (donating)
- SELL (selling)

Wobei TYPE eine der folgenden Abkürzungen sein kann:

- BK (book)
- CD (audio CD)
- HW (hardware)
- MG (magazine)
- NP (newspaper)
- SW (software)
- MISC (other items)

Nachricht:

Author:

Title:

Edition:

Year of publication:

Publisher:

ISBN (where applicable):

Condition of item:

Terms of exchange:

Als Grundlage für die Beschreibung des Zustands der jeweiligen Sache sollten dabei die Kriterien beim Gebrauchtverkauf auf Amazon.com zugrunde gelegt werden:

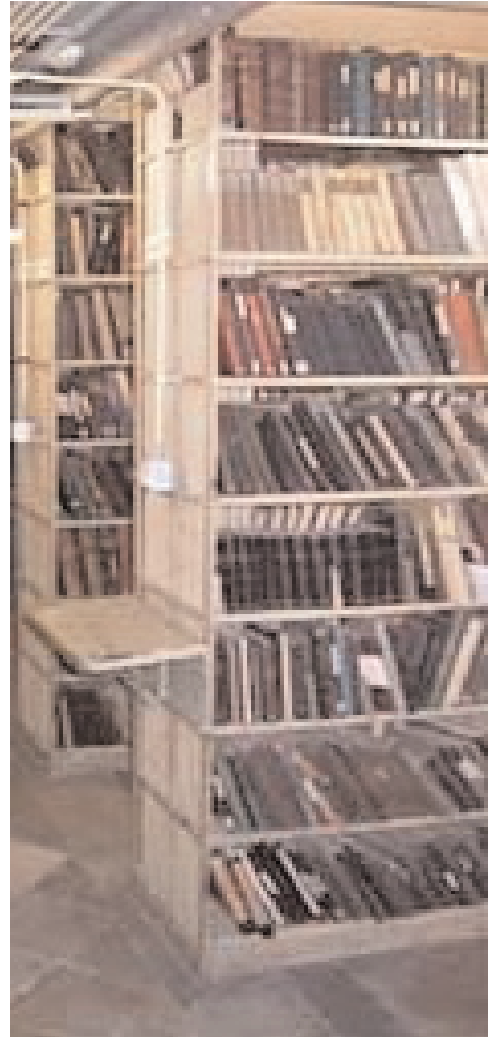
<http://www.amazon.com/exec/obidos/tg/browse/-/1161242/002-6641485-8497658>

Die Entscheidung, den Zugang zum „Büchermarkt“ vorerst auf GLD- und später dann auf ATA-Mitglieder zu beschränken, beruht darauf, dass wir uns alle zu gewissen ethischen Standards verpflichtet haben und uns letztlich nur selber schaden würden, wenn wir uns nicht entsprechend verhielten. Von daher sollte es eigentlich nicht zu derartigen Streitigkeiten kommen, wie sie auf eBay gang und gäbe zu sein scheinen. Da bleiben wir doch lieber in unserer großen „Familie“ und klären die Dinge untereinander, oder nicht?

So, ich hoffe, ich brauche euch jetzt nicht noch stundenlang über den rechtlichen Hintergrund zu informieren, z.B. dass weder der Listenbetreiber noch die Moderatoren noch die GLD, noch die ATA, sondern nur die jeweiligen „Inserenten“ für Verfügbarkeit, Zustand, Preis, Legalität, usw. jedweder auf der Liste angebotener oder gesuchter Waren verantwortlich sind. Die Lektion von der Geschichte: „Be careful what you ask for, you just might get it.“

In diesem Sinne allseits frohes Schaffen und viel Spaß im „Büchermarkt“

Roland Grefer



Taking Care of Business

by Jonathan T. Hine Jr., PhD

Abstract

The purpose of this article is to share some specific applications of the principles covered in Conference presentation IC-2 (“Taking Care of Business: Making It Pay”). It should serve as reference material after the Conference and does not cover the presentation itself. Examples include comparing assignments, evaluating job offers, considering long-term contracts, outsourcing services and the efficient use of the freelancer's time. They apply to translators, interpreters and other language mediators.

Introduction

In the session¹ we discussed the variables involved in finding the break-even points for our businesses. Essentially, the break-even point is that amount of income that just barely covers expenses. If we have properly accounted for all expenses in our budgeting (including setting aside reserves and all possible personal needs), then everything above the break-even point is pure profit. In a well-designed business model, profit need not be large to live well. Only corporations who must generate income for investors need to maximize profit. Freelancers, partnerships and corporations owned by one or a few entrepreneurs need only a small safety margin.

We can conveniently express the break-even point for a freelancer as a rate per hour of income needed. We can apply the amount of money needed per hour relatively easily to such questions as:

1. Will this particular assignment pay enough?
2. Should I seek or accept an in-house employment offer?
3. Should I sign a long-term employment contract?
4. Can I afford to quit my other job to pursue our freelancing full time?
5. Am I using my time efficiently?
6. Should I buy software or outsource my bookkeeping?

The answers to these questions are unique to each of us. Here are my thoughts about some typical situations that might confront any of us.

Evaluating and comparing assignments

This is the most straightforward application of the break-even principle. Almost all work can be expressed in time units. The time it takes to earn a certain amount of money can be compared to the revenue per hour needed to sustain the business. Along the way, we also can determine if there is time in the calendar to accept the job.

For example, a translation of 20,000 words at 1,000 words/hour will take 20 working hours to complete. A typical work day of eight hours only means five or six hours after interruptions, meals, etc., so this job should be completed in four working days without overtime, weekend work or rushing. If it is Friday afternoon (when I receive many of my assignments), that means close-of-business (COB) next Thursday, not Tuesday morning. The prospective client may ask for my per-word rate, but they should already have a total number in mind for the cost of the project. If I charge 15¢/word, this job will cost them US\$ 3,000 and my gross revenue will be US\$ 150/hour.

But what if the sample I saw included the only two legible pages in the document? To make things worse, the sample seemed to come from a straightforward financial statement, but the remaining pages contained a long technical discussion of the company's breakthroughs in a new field of science. As I struggle, my speed drops from 1,000 words/hour to 250. Assuming I turn it in on time (I have to eat

the overtime if I accepted the job at face value), I will have crammed more than 80 hours into six calendar days, lost the weekend and made US\$ 37.50/hour.

Apart from the family problems and short-term sleep deprivation, whether this job would be a disaster or not depends on whether US\$ 37.50/hour is above or below my break-even point. It is tempting to think of earning US\$ 3,000 in one week as a chance to take the next two weeks off, but that kind of thinking can be deadly if I do not earn my minimum hourly rate. Freelancing is a peak-and-valley business, so the working weeks have to cover the weeks of unremunerative activity. I recommend keeping an eye on the hourly rate and working to make overtime rushes exceptional, not routine.

Evaluating interpreting assignments is one step simpler than translation work, because the piece rate does not enter the equation. It is expressed as money per hour already. But what is a duty hour for the interpreter? If the client expects to pay only for time on-site (conference, meeting, etc.), then my rate has to be large enough to cover the time spent traveling, researching and setting up. There is no need to tailor that to each job. If I know from my records that I typically spend a certain amount of time traveling or performing research, I can work that into the calculation of my break-even hourly rate. If my records are detailed enough, I could have a rate for local interpreting and one for interpreting that requires travel.



The specific expenses for each interpreting assignment, e.g., airfare, hotels, food, incidental travel expenses, should be invoiced and reimbursed in addition to the interpreting rate based on duty hours. However, the client may not agree to let the interpreter bill for travel time, so the hourly rate may have to cover that. An interesting angle when comparing assignments appears in deciding whether to take a job on the road or stay home. This is not a discussion of personal preferences or paying for one's travel. It involves looking at a traveling assignment from a profit/loss point of view, and letting the profitability of the assignment be part of the decision to accept or not.

For example, I have a client who pays me to interpret and sight-translate at one of their field locations, so I have to travel there. This client cannot pay overtime, but they do pay my travel expenses, including hotel, food, rental car, etc. They also offered to pay me a reduced rate for the hours I spend traveling, up to eight hours/day. The hourly rate for duty hours appeared to be below my break-even point, so at first I thought "no way!" The work was interesting, however, so I took my first assignment out of curiosity. I realized that I would have free time after duty hours, so I took my other work with me. Sitting in the hotel finishing a translation, it occurred to me that it was costing me nothing to operate a second office and that my variable living expenses (food, laundry, etc.) were being reimbursed. Thanks to modern communications, my clients could reach me anywhere, so not being in my home office was no longer relevant. I recalculated my break-even point, taking into account the fact that I had more hours available for other work. By taking into account the other work, I realized that these trips were profitable. They are hardly moneymakers, but at least they cover the break-even point, which allows me to accept them because I find the assignments interesting.

This example shows a profitable aspect of traveling. It can work the other way. An exhausting conference interpreting assignment is no place to try to accomplish anything else. On the other hand, if an assignment allows some real free time, visits to potential or current clients might be feasible, and generate more business. That opportunity might make a difference in choosing to accept a traveling assignment that barely breaks even.

Evaluating employment offers

Trying to compare employment with freelancing can easily become a matter of apples and oranges. The work is all fruit, but the similarities end there.

However, by developing our break-even point using a business model, we can compare the different features of a job offer and understand whether we would be better off economically with the job or freelancing. The business model requires us to add up 1) personal services 2) other operational expenses and 3) capitalization and growth to come up with the needs of the business. If we look back into those elements when comparing the features of a job position, we can make sure we have covered the same things in both situations.

For example, benefits are an important aspect of most jobs. Most employer health plans require that the employee pay part of the premiums out of pay. These are rarely included in the description of the position. We need to subtract employee premiums from the salary offer to paint a true picture of the offer. Most employer benefit packages do cost less than typical packages a freelancer can buy. But the difference may be close enough to allow other considerations to prevail in the decision.

Another important benefit is retirement. The potential employer may match employee contributions to a pension fund or retirement plan. In this case, compare what you are saving for retirement as a freelancer to the combined employer/employee contribution being offered, adding the difference to the salary offer if it is more than you are saving now.

Using a business model to consider finances also allows you to understand how many hours you will work for an employer and to compare it to your freelance situation. For example, you can take the same standard 2080 hours/year you started with to calculate the break-even point and subtract the holidays, paid leave, sick leave from the employer's salary offer to come up with an hourly figure to compare to your break-even point. Do this after you have aligned the salary offer with your freelance revenue in terms of benefits. A salary offer is one thing, but the expected duty hours can affect the take-home hourly pay dramatically. You need to use hourly income to compare freelancing with an employment position.

Evaluating long-term contracts

This is not the same thing as the job offer example. A long-term contract could either be for a very large job with an extended deadline, like a book translation, or full-time employment for an extended period, say of three months or more. The former is still freelancing and the latter is a form of employment. Many freelancers in fields from engineering to technical writing move from one contract job to another. Language mediators who teach specific courses in local colleges often work under these conditions as adjunct Faculty.

The key difference here is that the contract is for a specific project. The employment relationship ends when the project is completed, the course is taught or the translation is accepted. To evaluate such an arrangement, you need to use the same techniques you would to evaluate freelance assignments, plus a few aspects of employment offers.

While you are working on the contract, will you be free to take other work? If the contract is for full-time employment, you need to look for time to set up your next contract, or figure out how to maintain your freelance client base by taking some freelance work on the side. Whether you can do that may affect whether you accept the contract. If the contract is not an employment contract, you need to estimate how many hours per week you will devote to it and plan your other freelance work accordingly. Under an employment contract, your taxes will be withheld, so your quarterly estimated taxes would be less. Under a freelance contract, you will need to consider whether cash will be coming in during the contract to make your quarterly tax payments and other bills.

In either case, divide the hours you will work on the contract into the expected revenue and make sure you will be working above your break-even point.

Evaluating work efficiency

Some of the most important data in calculating the break-even point is what are called indirect costs or overhead. This is the work we do for the business, which cannot be attributed to any one job. Errands to the office supply store, the post office and the accountant are good examples. So is coming to the ATA Conference and other training. All our clients benefit from this activity, so they share in paying for it. If you are a sole proprietor, it is easy to spend an hour or more on overhead activities for every two hours spent on a billable project. That would add indirect costs of 30% to what you are doing. The problem with overhead is that it is not directly productive, so it needs to be kept under control. You cannot bill the time you spend on overhead activities, so if you spend too much time on it, your break-even point and your rates, will creep up without your adding any value to your service. After a while, your clients will either go elsewhere to get the same service for less, or insist on more service for the same money.

Controlling overhead is impossible without keeping good records. That means making note of the time you spend on overhead activity. I have not found it useful to try to break down all the different activities, but I do keep a running tally and make sure I log it when I finish each day.

Every so often, add the total hours billed and the overhead hours together. The sum will tell you immediately if you are working full-time as a freelancer. If you are recording all your time, it should add up to at least 40 hours/week or whatever number of hours/week you used to calculate your break-even point. One discovery you may make is that you are devoting more "working hours" to volunteer activities or household chores than you realize. The hours worked/week helps you keep on track.

As a freelancer you have the freedom of arranging your schedule to suit your needs. Thus you could volunteer on days that you know you will have the evening free to make up the work, or plan to work on a weekend, because you took some weekdays off). Checking at the end of the week or month, you can make sure that you are still putting enough hours into the business overall. While you are doing this, divide the number of overhead hours by the total hours. That quotient is your overhead percentage. It is the number you should use in calculating your break-even point. It should also be the same or less than it was the last time you calculated it. As you become more experienced, your overhead should go down, because you are learning to work more efficiently. If it is going up, make sure you know why. You may discover the need to collect your mail faster, perhaps outsource your bookkeeping or hire a part-time office assistant. It may be that you are devoting more time than usual to professional but non-paying activities. It may be a short-term activity like annual taxes, which will be absorbed in the numbers later in the year.

Evaluating services

When the overhead percentage gets too high or the work hours/week too low, it is time to consider whether it would be more efficient to pay someone else to do the things that we are spending our time on. From having the lawn mowed to changing the oil in the car to keeping the accounting records, almost every routine activity in our week has a cost associated with it. If you are doing it yourself, that cost is the hourly rate you have budgeted for yourself in calculating the break-even point. If you are the employee of your own company, it is whatever you pay yourself plus benefits.

For example, I used to maintain my own car, but I stopped doing that long ago. I determined that although the dealer's mechanics cost more per hour than I did, they performed the maintenance much faster than I could. I now take my work with me and wait for the car, so I am earning money while the mechanics services the vehicle.

Whether to use a bookkeeper or do your own books is a difficult and personal question. Many freelancers I have met maintain their own books. Some use accounting software like Quicken®, or Microsoft Money®, which are designed for people without accounting training. Others use more powerful programs like Peachtree®, First Accounting® or corporate software packages.

If you are first starting out you may get by with a spreadsheet or a notebook and a checkbook register. But once the business starts making a profit and you have to file estimated taxes in advance, you will probably need help.

If you know the value of your time, you can determine whether you should be paying someone to keep your books for you. Trying to do it yourself for a while is helpful, because you will understand what you are trying to outsource and you should be able to talk intelligently with your bookkeeper or accountant. You will still have to keep your own time records probably, but the idea is to divide the work so you and your accountant are doing what you do best.

Conclusion

In business, the break-even point and the elements that go into it crop up again and again. From small decisions like whether to rent a post office box to big ones like whether it is time to incorporate, you will need to analyze the financial health of your business on a regular basis. Eventually, you should be able to think in terms of profitability as easily as holding a conversation about style and register in language.

One reason that I like the break-even point as a reference is that it helps me treat everyone fairly, including myself. Because I do not have shareholders to make rich, I can be satisfied just knowing my business is profitable. My break-even point includes what I need to live and for my business to grow. I know that I am delivering my service at the lowest possible cost to my clients. I can say "no" when I have to without feeling bad, and I know when I can offer a discount for specific projects. I am also delivering the highest quality I can, because self-improvement and training is included. After all, quality is not cheap – it is priceless!

For more information

To learn more, sign up for the Professional Development Seminars offered nationwide by ATA, come to workshops at ATA Conferences and to meetings of ATA-affiliated chapters. The material in the presentations is continually changing to meet the needs of the attendees. If you have questions about freelancing or organizing your business, please send them to the author at hine@scriptorservices.com. We will try to answer them in the ATA Chronicle or in the conference presentations.

1) Those who are unable to attend the session may read about computing the break-even point and some of its uses in the ATA Chronicle (Hine, 2002; Hine, 1998) and in a booklet available from i.b.d. ltd. at the Conference and by mail (Hine 1997/2004).

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Understanding the Power of a Medical Interpreter

by Zarita Araújo-Lane and Vonessa Phillips

Interpreters live in a dichotomous world. On one end, they are struggling to be viewed as professionals by health care providers and institutions. On the opposite end, the communities they serve often perceive them as medical providers. In this article, we aim to help interpreters come to terms with both the responsibilities and the ambiguities associated with the interpreting profession by exploring key concepts such as **impartiality** and **transparency** as well as **transference** and **countertransference** in the triadic encounter.

The triadic encounter is the interaction among an interpreter, patient, and provider, the interpreter being the receiver and transmitter of medical information. If we call the triadic encounter a “fabric”, then the interpreter’s role is that of “weaver”, a language technician implementing special skill interwoven with knowledge of ethics, language proficiency and cultural sensitivity.

Understanding the role of the **culture broker** is vital to finding one’s **professional center**. By “center” we mean the ability of an interpreter to be accurate, ethical and transparent, and to be aware of a complex dynamic which involves an understanding of self (**transference** and **countertransference**), of the patient’s culture and of the American health care system, as well as a great proficiency in at least three languages: English, the target language and *medicalese*. Through a series of true-to-life examples, we will coach interpreters on how to handle complex ethical issues such as: Is it ever possible to be completely impartial in the triadic encounter?

1. Impartiality vs. Transparency in Cultural Coaching

“The medical interpreter will maintain impartiality”

MMIA Standards of Practice, 1996

Since the beginning, a precept of the interpreter movement towards professionalization has been that interpreters must be impartial. The intent of this rule was that interpreters realize they cannot take sides or impose their own ideas in a session, even if they personally believe that they are helping a patient or a provider.

But the concept of impartiality has often been taken to extremes. Many interpreters would argue that the very act of **cultural brokering** is a violation of **impartiality**, since the interpreter as a cultural broker, by necessity, imposes a personal perception on the triadic encounter. Thus, some interpreters have refrained from acting as cultural brokers for the sake of maintaining this ideal of impartiality. So the question remains: is it possible to act as a cultural broker while remaining truly impartial?

Cultural brokering is an accepted part of the interpreter’s function. While some interpreters might resist the concept of informing a provider of the possibility of a culture clash before a session begins, such action is supported by section B-2 of the Massachusetts Medical Interpreters Association *Standards of Practice*, which states, as an indicator of mastery, that the professional interpreter’s duty is to share cultural information that may be relevant and may help clarify a problem. However, the interpreter should be sure to preface any cultural coaching with a tactful comment such as, “It may not be the case in this particular situation, but in my experience (this type of reaction) is common among members of (a certain) community, and you may want to check in with the patient on this issue.”

Just how far can an interpreter go as a cultural broker? While the answer varies with each case, the MMIA *Standards of Practice* states that the interpreter, in order to fully accomplish his or her work, must “pick up on verbal and non-verbal cues that may indicate the listener is confused or does not

understand”, and intervene accordingly. Hence, we see the need for some action, and perhaps a certain measure of assertiveness, on the part of the interpreter. Thus, impartiality is not synonymous with inaction, and the interpreter who sticks to the role of conduit to maintain impartiality will hinder, and not help, a session.

Yes, impartiality is a difficult concept for a human being to grasp. Even professionals with many years of experience in the triadic encounter struggle with living up to this standard of practice. It can be especially difficult when the interpreter knows there are high stakes involved, such as the patient’s mental health and physical well being, as well as a possible adverse community reaction to an interpreter who does not follow “proper” cultural etiquette or religious norms.

The act of acknowledging the struggle with impartiality, paired with the ability to manage personal discomfort in the triadic encounter is called **transparency**. In transparency, it is understood that the interpreter may not impose personal feelings on a session, (**transference**, or unconscious feelings that are related to the ways in which relationships with family and connection to culture influence one’s behavior as a cultural broker). A transparent interpreter, rather than omitting information, would acknowledge a perceived cultural conflict in a private conversation with the provider and collaborate in the provider’s search for healthy alternatives.

For example, abortion is one of various treatment choices offered by providers in cases of high-risk pregnancy. An interpreter may strongly believe that a patient from a certain ethnic or religious group will walk away from a session as soon as the word “abortion” is sounded. Or the interpreter may predict an adverse reaction to clinical suggestions and a subsequent failure to return for follow-up treatment. The interpreter, under pressure, might make the deliberate decision not to interpret the provider’s comments on abortion. Clearly, this would be the wrong professional choice and an abuse of power. And yet the number of interpreter service coordinators who get calls from medical providers and support staffs that suspect an interpreter has deliberately omitted vital information is astounding.

If it becomes evident that the patient might harbor a deep distrust of the American medical system, perhaps due to a perceived cultural or religious lapse on the part of the provider, the transparent interpreter should address this possibility privately with the provider. Instead of making generalizations to promote stereotypes, the interpreter might preface the cultural coaching with the clarifying phrases “it seems to me” or “it is my understanding”. The interpreter must take care not to lump entire ethnic or religious groups together, as such rigidity is detrimental to the triadic relationship and can steer a provider in the wrong direction.

The challenge in cultural coaching is that an interpreter must determine whether the perceived conflict stems from the patient, or if it is, in reality, a personal issue. Even professionals of the highest caliber sometimes experience countertransference issues in the triadic encounter. **Countertransference** is the interpreter’s conscious or unconscious emotional response to the patient or provider. In countertransference, the conflict perceived by the interpreter may not initially have been an issue for the patient, but could easily be carried by the interpreter to the point of becoming an impediment to successful triadic communication.

Interpreters who have not been coached on how to approach controversial issues such as abortion often attempt to manage difficult sessions by “shutting down” or repressing feelings of discomfort, rather than working them out. When personal conflict is ignored, the result is often impulsive behavior, such as the failure to interpret information shared in a session.

Hence, as interpreter trainers and program coordinators reexamine the concept of impartiality, they begin to look closely at how other health care professions deal with similar issues, and it becomes clear that interpreters must be trained in transparency, rather than in cold impartiality. In transparency, the fact remains that interpreters cannot impose their own ideas or take sides in a session, but there is a deeper understanding, namely: Interpreters are human beings and as such can not be entirely impartial in face of situations, events and beliefs.

Transparent interpreters are encouraged to identify, explore, and work through personal biases

that could potentially affect their performance in the triadic encounter. Simultaneously, they are trained to discern the potential for cultural misunderstanding in a session. When they sense a breakdown in intercultural communication, they control the impulse to “fix” or to “explain”, and, instead of imposing doubt and acting as providers, they wait for the right moment to provide the necessary coaching.

The **transparent interpreter** chooses to inform the provider of the possibility of the existence of cultural or religious beliefs that may affect the patient’s reaction to a specific treatment plan, and may suggest to the provider culturally appropriate ways of approaching controversial issues. This brief intervention should be done in a non-imposing way, and the interpreter should suggest that the provider explain to the patient that a potentially sensitive topic is about to be discussed. In the above-mentioned example, the interpreter might have suggested to the provider, in a private discussion outside the exam room, the use of a synonym for the term “abortion”, such as “terminating the pregnancy”. If the provider were to agree, the interpreter would simply interpret and both parties would wait to see the patient’s reaction to the clinical recommendations.

In an abortion case, standard close-ended questioning may prove useless to the provider. For example, the provider may inform the patient of her choices and the patient may answer “yes” without really meaning it, which could lead the provider to believe that the patient had indeed agreed to the abortion. Close-ended questions often do not work well for patients who do not feel comfortable challenging authority, and the interpreter, familiar with this aspect of the patient’s culture, may suspect that the patient’s answer was just a formality. Rather than asking the patient about her choice of abortion, the interpreter could ask the provider to step outside. Privately, the interpreter could suggest that the provider use the explanatory model, in which he or she begins to “explain” the reason for a consideration of “the ending” or “the termination” of the pregnancy, perhaps in a story form.

In extreme cases, a provider may believe that a mother’s survival depends on her decision to go ahead with an abortion. On the other hand, a mother’s personal belief system may prohibit even the discussion of abortion as an option. But as a result of the transparent interpreter’s cultural coaching, both provider and patient will have the opportunity to hear each other’s views through unobstructed cross-cultural communication. The interpreter’s intervention will result in the patient’s awareness of her clinical options, and in the provider’s greater understanding of that patient’s beliefs. Patient and provider will make the ultimate decision, and the transparent interpreter will leave the session with the freedom of a good conscience. By not making the decision to omit information, the interpreter will have avoided the burden of “saving” or “killing” a patient.

However, if the interpreter had acted merely as a conduit, interpreting spoken words while ignoring their underlying cultural and religious implications, the patient might have left the session to never return for follow-up care, possibly suffering complications and even death. It is clear, then, that by explaining to the provider the possible harmful outcome of the use of the term “abortion”, the interpreter may actually have contributed to a positive outcome in a triadic relationship where respect and trust are preserved.

2. Should an interpreter address the provider or the patient when performing the non-conduit aspects of medical interpretation?

Many interpreters have expressed a desire to coach patients in their understanding of the American medical system. These argue that to be a cultural broker with the provider is to be a “provider advocate” and, that being the case; it is also part of their job to act as “patient advocates”. The question raised is: Should an interpreter coach a patient without the involvement of the provider? Before you answer, consider the following cases.

A patient refuses to take his medication, so that he can keep drinking his daily glass of wine. The interpreter, familiar with this culturally influenced custom, fears that the patient will not tell the provider about neglecting the treatment, so she tells the patient that since he’s not an alcoholic, it’s all

right to drink the one glass, as long as he is aware of the adverse reaction between alcohol and the medication. When the patient sees the doctor at a follow-up visit, it appears that in fact alcohol is a major issue in the healing process. The patient has a history of alcoholism.

A young patient is pregnant. She insists on having a caesarian, a common practice in her country of origin. As both the interpreter and the patient leave the session to schedule a follow-up appointment, the patient complains to the interpreter that doctors in the United States are not as friendly as doctors in her country. The interpreter attempts to correct this perceived misunderstanding and tells the patient that in the US, caesarians are not recommended unless the delivery is considered high risk. At a subsequent visit, the provider, unaware of the patient's feelings and conversation with the interpreter, finds the patient resistant to treatment suggestions and with multiple complaints regarding her pregnancy. He begins to order more tests.

In the above-mentioned cases, the interpreters stepped outside the boundaries of their profession and became, for just a moment, medical providers. By practicing cultural coaching with patients, without the presence and orientation of a provider, they run the **risk of creating an unequal balance of power** and subsequently breaking trust in the triadic relationship by promoting an environment in which the boundaries between interpreting and medical practice are blurred. And their advice could kill.

Do interpreters really have “power” over patients? Well, to the patient, the interpreter is the one that speaks the same language, often comes from the same country, and can even share the same physical traits. “The interpreter is like me,” the patient reasons, “and the interpreter is my friend”.

Understandably, patients may initially relish the thought of having a friend, or ally, in the triadic encounter. It is up to the interpreter, then, to balance the distribution of power in a medical session. In the above-mentioned cases, the interpreter would have done well to hold a pre-session and or post-session with the provider, or at the very least, pull the provider aside to discuss the cultural issues that could potentially influence the session. The provider, now equipped with cultural tools, could take the initiative to address the issue with the patient. After all, the ultimate goal of an interpreting session is that patient and provider develop a therapeutic alliance. And a large part of the healing process stems from a patient's trust in a provider.

In conclusion, culture shapes meaning, and interpreters have the power to “save lives” when accurate with the meaning of the messages they convey. But interpreters can also “kill” patients through inaccurate interpretation due to a poor understanding of self (transference and countertransference). May we all strive to be transparent interpreters and to fully accomplish our work, thus securing the success of cross-cultural communication in the triadic encounter!

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2. NN, in Planung. Auf Deutsch.
Aus dem Bereich "Film" (Untertitelung, Synchronisation, gängiger Jargon).
3. Sue Young (ITI GerNet)
An introduction to revision - with hands-on practice

4. Frances Mechan-Schmidt (BDÜ, MIL)
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Chemical Aspects of Biomedical Translations

by S. Edmund Berger

Many chemical terms and concepts are encountered by translators working in the biomedical field. Not all these terms are always crystal-clear. Because the author believes that a good understanding of the text to be translated is always helpful, the purpose of this presentation is to elucidate some of the basic as well as more obscure concepts and potentially troublesome terminology. The discussion will center on selected topics from the fields of optical isomerism, drug chirality, drug characterization, pharmacokinetics, modified-release dosage forms, solution concentration, emulsions and others. The presentation should be of interest to colleagues translating into and out of English.

1. Introduction

In translating biomedical texts, we often encounter chemical terms and concepts, some of them familiar, some not. In many instances, our dictionaries, on-line glossaries etc will tell us their meaning. Most often, we do not have to worry about the meaning of the terms, as long as we are sure that in our translation we are rendering them correctly. For example, we do not have to understand the term “buffer” in the chemical sense as long as we are sure of our translation. The author believes, however, that a clear understanding of the chemical terms appearing in the source language can help dispel any doubts about their meaning. For example, not too long ago, the author ran into the problem of how to render the term “glucoside”. In the source language, this term was erroneously spelled “glycoside”. The two terms mean different things, and from the context it was clear that “glucoside” was meant. In this case a lack of understanding could easily have led to a mistranslation.

Biomedical texts deal with a broad spectrum of subjects and fields. Translations are required by individuals working in medical, industrial, pharmaceutical, government, scientific, regulatory, commercial, legal and many other organizations, to mention just a few. In many cases, the focus in such texts is on the synthesis, development, characterization, safety, manufacture, uses and marketing of pharmaceuticals. Patents, package inserts and material safety data sheets (MSDS) are examples of texts that often need to be translated. Pharmaceuticals are chemicals, and it is therefore not surprising that translators must deal with a plethora of chemical terms and concepts when translating pharmaceutical texts.

In the clinical field, we often encounter a similar situation. Biological and diagnostic tests, blood chemistry, urinalysis, biopsies etc are frequently described in biomedical texts in addition to physical test methods (x-ray, MRI, tomography, electrophoresis etc). For accurate translation, such test methods etc often require a reasonable familiarity with chemical terminology and concepts. In this presentation, the writer will discuss a few randomly selected situations that in his opinion may benefit at least some colleagues who routinely undertake biomedical translations.

2. Chirality and Chiral Drugs

In 2002, worldwide sales of chiral, single-enantiomer pharmaceutical products approached \$ 160 billion! For example, Lipitor sales were \$ 8.0 billion, Plavix \$ 2.9 billion, Zolofit \$2.7 billion and Nexium \$2.0 billion (Ref. 1). Obviously this field is of great importance to the pharmaceutical industry and, hence, to translators working in the biomedical field. The following is an attempt to elucidate concepts and terminology one may encounter in translating texts dealing with chiral drugs.

2.1 Optical Isomerism

Isomers are compounds of the same general formula and molecular weight but different in structure

(arrangement of the atoms in the molecule) and therefore usually different in their chemical behavior. Optical isomerism is a branch of stereochemistry, or chemistry as it relates to the spatial or steric arrangement of atoms in a molecule. It is of great interest because it is involved in the biological activities of many compounds, such as pharmaceuticals, hormones, pesticides, sweeteners etc. To begin, let us consider the concepts of **optical activity** and **asymmetric** or **chiral center**.

A compound is optically active if its solution is able to rotate a plane of polarized light to the right (**dextrorotatory**) or to the left (**levorotatory**). Ordinary white light consists of rays of different wavelengths vibrating in many different planes. Monochromatic light (single wavelength), for example that emitted by a sodium lamp, also consists of waves vibrating in many planes. If such light is made to pass through a crystal of Iceland spar (transparent variety of the mineral calcite, pure calcium carbonate), the emerging rays vibrate in a single plane determined by the orientation of the crystal. We refer to such light as **plane-polarized light**. Some compounds are capable of interacting with such light by virtue of a special characteristic of their molecule - an **asymmetric** or **chiral center** - the interaction resulting in a rotation of the plane of polarized light that passes through a solution of such a compound. The phenomenon is known as **optical rotation**. The sense and extent of such rotation can be measured in an instrument called polarimeter.

Only compounds possessing a center of asymmetry or a chiral center can be optically active. Carbon is tetravalent, namely capable of forming four bonds with other atoms or groups of atoms. If four different atoms or groups are attached to the carbon, the carbon atom is said to be asymmetric or



chiral and capable of existing in two forms which are mirror images of each other. If one form is dextrorotatory the other form will be levorotatory. A mixture of equal amounts of these two forms is a **racemic mixture** or **racemate** and does not show optical activity. Such isomers are called **enantiomers** or **optical antipodes**.

Different nomenclature systems are used to identify such compounds. In one system, **d-** or **+** indicate that the compound is dextrorotatory, and **l-** or **-** that it is levorotatory. In another system (Fisher-Rosanoff nomenclature), **D-** and **L-** indicate whether or not the absolute configuration of the organic compound, for example a sugar, is the same as that of D-glyceraldehyde, the simplest sugar. There is no simple relationship between the sign of rotation (**d-** or **l-**) and the absolute configuration (D- or L-). A D-compound can be levorotary and vice-versa. Because of this ambiguity, the Cahn, Ingold, Prelog sequence rule was introduced and is widely used to designate absolute configuration. This convention considers that the groups are attached to the chiral center according to a sequence that enumerates functions

according to decreasing number of atoms. Configurations are indicated by "R" (rectus or right) if this sequence follows a clockwise direction and "S" (sinister or left) if it is counterclockwise.

Chiral compounds are of great interest because living systems are chiral. Proteins, nucleic acids and polysaccharides possess characteristic chiral structures that are closely related to their functions. Because of chirality, living organisms usually show different biological responses to one or the other of a pair of enantiomers.

Here are a few examples. Sodium L-(+)-glutamate has a pleasant taste, whereas its mirror image, D-(-)-glutamate is bitter or flat. Dextromethorphan is a popular cough medicine, whereas the levo-isomer is a powerful narcotic. In the early 1960's, thalidomide, an apparently nontoxic sedative,

was becoming widely used for bedtime sedation of adults, including pregnant women. This eventually resulted in about 10,000 malformed babies in different parts of the world! Although toxicologists had always been aware, on a theoretical basis, that drug substances could cause damage to the developing organism, in the United States prior to thalidomide there had been no confirmed examples of drug-induced birth defects since the beginning of drug regulation in 1906 (Ref. 3). Interestingly, thalidomide used at that time was the racemate, and only the (S)-(-) enantiomer was later found to be teratogenic.

Another example of the desirability of single-enantiomer chiral drugs is the case of perhexilline, a drug used to treat abnormal heart rhythms. In the 1980's, the racemate killed a number of people who unknowingly had accumulated in their bodies gram quantities of the enantiomer that was more slowly metabolized, namely that had a much longer half-life. This was fatal.

Several tests have since been developed to check drugs and other substances for teratogenicity. The Ames test is used most frequently for this purpose. Details can be found in Dorland's Illustrated Medical Dictionary (Ref. 4).

Obviously, single-enantiomer chiral drugs and not the racemic mixtures are wanted in many cases. Hence, the pharmaceutical industry is very much interested in developing methodology for making chiral drugs. **Standard chemical synthesis leads to racemic mixtures.** Making chiral compounds directly or resolving racemic mixtures into the two optical antipodes and then separating them, for example by preparative chromatography, are areas of major present industrial interest.

3. Chemico-Physical Characterization of Pharmaceuticals

For a variety of reasons, drug ingredients, especially the active ones, are carefully characterized for their properties. This is necessary to produce safe and effective drugs. The biomedical texts or parts of such texts dealing with the chemical and physical properties of a drug often refer to concepts that are not necessarily clearly understood, although their translation may not present a problem. Let us look at some examples.

3.1 Solution Concentration

The concentration of a solution can be expressed in different ways, for example as percentage, parts, molarity, molality, normality etc. **Molarity** is the number of moles (molecular weight of a substance expressed in grams) of solute contained in 1 liter of solution (moles/liter). **Molality** is the number of moles of solute divided by the mass of solvent (moles/kg). Normality is the concentration expressed in equivalents per liter (1 equivalent = atomic or molecular weight divided by the valency or functionality). **Normality** is mostly used in volumetric analysis.

A term we very often encounter in biomedical texts is that of **pH** which is related to the hydrogen ion concentration of a solution. Everybody knows that pH tells us something about the acidity or alkalinity of an aqueous solution, and the term certainly presents no translation problems. What do we mean by pH? Water dissociates as follows:



In pure water, the concentrations of H^+ and OH^- are equal and at 25 °C both have the values of 1×10^{-7} mol/L. pH is defined as the negative logarithm of the hydrogen ion concentration $[\text{H}^+]$:

$$\text{pH} = -\log_{10} [\text{H}^+]$$

This means, for example, that the pH of a neutral solution such as pure water is 7. Acidic solutions have $\text{pH} < 7$ and alkaline solution have $\text{pH} > 7$.

3.2 Colligative Properties

When a nonvolatile solute is dissolved in a solvent, certain properties are largely independent of the nature of the solute and are determined by the concentration of the solute particles (Ref. 2). These properties are known as **colligative properties**.

Among the important colligative properties is the **osmotic pressure**. This is the external pressure that must be applied to the solution to prevent it from being diluted by the entry of solvent via a process we refer to as **osmosis**. This refers to spontaneous diffusion of solvent from a solution of low solute concentration (or a pure solvent) into a more concentrated one through a semipermeable membrane. Such a membrane separates the two solutions and is permeable only to solvent molecules. Considering that many structures in nature, for example cells, organs etc, are enveloped by membranes, it is clear why osmotic pressure is an important concept to understand.

The number of osmotically active particles in a solution can be expressed in terms of osmoles or milliosmoles, $1 \text{ osmol} = 1 \times 10^3 \text{ mosmol}$. The concentration of a solution can thus be expressed in terms of its **osmolality** or its **osmolarity**, where osmolality is the number of osmoles (osmotically active moles) per kilogram of water and osmolarity is the number of osmoles per liter of solution. Solutions having the same osmotic pressure are referred to as **iso-osmotic**.

4. Drug Characterization

An area of interest from the standpoint of this presentation is that of characterizing, analyzing and testing pharmaceutical substances. This is a very broad area, and we shall limit ourselves to only a few examples to show how chemical procedures are applied in this case. Let us look at the example of pharmaceutical proteins. By this we mean proteins such as insulin, alpha-interferon, calcitonin and others. In the case of insulin and other proteins for injection, for example, it is very important to guarantee the integrity of the proteins before they are introduced into the human body. Being polymeric substances, they require a different analytical approach than do other kinds of active drugs which in most cases are simple, monomeric substances.

A number of pharmacological, immunological, spectroscopic, electrophoretic and chromatographic methods are used for close characterization of a protein in addition to in-vivo animal tests and in-vitro methods. Examples of these are UV and IR spectrophotometry, fluorimetry, mass spectrometry and various forms of chromatography, to mention just a few. Pharmaceutical substances, in general, must meet stringent purity, safety and efficacy standards. Drug characterization is obviously an area where chemistry and chemico-physical methods play a prominent role.

5. Modified-Release Oral Drug Dosage Forms

In many cases it is important that an acceptable therapeutic concentration of the active drug at the site of action be reached immediately and then kept constant for the desired duration of treatment. This can be achieved by repetitive administration of conventional oral dosage forms. In many cases, however, it is desirable to use modified-release dosage forms. The design of such forms depends on, among other things, an effective chemical approach. Many different modified-release systems are currently in use, for example: delayed release, repeat-action, prolonged release, sustained release, extended release and controlled release. According to the US Pharmacopeia, the terms controlled release, prolonged release and sustained release are interchangeable with extended release. Components of a modified-release delivery form include the active drug and the release-controlling system. The latter is often based on an imaginative chemical approach.

A good example of a delayed-release system are the enteric-coated tablets. This technique is

used to protect the tablet core, or active drug, from disintegrating in the acid environment of the stomach. Reasons; a) protecting active constituents that are unstable at low pH as that prevailing in the stomach; b) protecting the stomach lining from irritation by certain drugs, and c) making drug absorption easier when the drug is absorbed preferentially from the intestine. Enteric coatings are usually made from polymers such as cellulose acetate phthalate and some acrylic derivatives. These polymers contain free carboxylic acid groups on the polymer backbone so that their solubility varies depending on pH. They are virtually insoluble at low pH in an aqueous medium such as that prevailing in the stomach, becoming gradually more soluble in the intestines where the pH is higher.

6. Miscellaneous

6.1 Emulsions

In the pharmaceutical field, the main use of emulsions is for oral, rectal and topical administration of oils and oil-soluble drugs. Lipid emulsions are also widely used for intravenous feeding, and they can be used as a sustained-release dosage form. Emulsions in which an oil is dispersed in water are referred to as oil-in-water or o/w emulsions, and the reverse case are water-in-oil or w/o emulsions.

An important goal in formulating any emulsion is to achieve emulsion stability usually by an appropriate choice of emulsifiers, for example surfactants. A frequently used method for formulating emulsions is the HLB method or **hydrophilic-lipophilic balance** method. Surfactant molecules usually consist of a lipophilic, nonpolar part and a hydrophilic or polar part. We can represent such a molecule by the general formula R-X where R is, for example, a long-chain alkyl group and X is a polar group such as -OH, COONa, -SO₃Na etc. Emulsion stability is enhanced by a proper balance of these two parts in the surfactant molecule.

Each surfactant can be given an HLB number representing the relative proportion of the two parts of the molecule. High numbers indicate surfactants exhibiting mainly hydrophilic or polar properties, and low numbers represent lipophilic or nonpolar ones. The HLB method is based on a calculation of the correct balance from these HLB numbers. The formulation derived in this manner is then subjected to long-term stability tests.

6.2 Clearance

In biomedical texts, the term “clearance” usually refers to a quantitative measure of the rate at which a substance is removed from the blood by a process such as renal clearance or hepatic clearance. It indicates the volume of plasma that is completely cleared of the substance per unit time. For example, renal clearance is given by the formula $C = V \times U/P$ where C is the clearance, V the volume of urine in mL/min, U the urine concentration of the substance and P the plasma concentration. A commonly used clinical measurement is the creatinine clearance, because it gives a close estimate of the glomerular filtration rate thus providing an insight into the functioning of the kidneys. The kidney glomerulus is a globular tuft formed by capillaries in the kidney. It is the site of the filtration barrier between the blood and the kidney.

6.3 Order of Reaction

In texts dealing with pharmacokinetics, we often encounter terms such as half-life, reaction rate and order of reaction. While we intuitively accept half-life and reaction rate, the concept of order of reaction is not as clear.

As already stated, molecularity is the number of molecules involved in forming a product. For

example, $A \rightarrow B + C$ is a unimolecular reaction, and $A + B \rightarrow C$ is a bimolecular one. The order of a reaction is the number of concentration terms that determine the reaction rate. Thus in the first of the above two reactions the rate depends on only one concentration, namely that of compound A. Such a reaction is referred to as a **first-order reaction**. In the second case, the rate depends on two concentrations, and the reaction is referred to a **second-order reaction**. In pharmaceutical science, first order reactions are by far the most important ones. Many drugs decompose on storage and the passage of drugs from one body compartment to another follow first-order kinetics. In a **zero-order reaction**, the rate of reaction is independent of the concentration of the reactants, namely the rate is constant. A constant rate of drug release, for example, from a dosage form is very desirable.

7. Concluding Remarks

In many biomedical texts, translators run into chemical concepts and terms that are not always as clear as they could be. But this is not generally true and does not apply to all such texts. Many publications, reports etc deal with surgery, dentistry, mental illness etc where chemical terminology is not prominent. As already stated, the author firmly believes that a clear understanding of every aspect of a text leads to better translations. This presentation is offered in that spirit.

8. Literature Cited

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The Ghost of Data Present

by Roland Grefer

One of the issues all too often and very easily forgotten is how dependent we have become on computers in our day-to-day business activities and work processes.

Of crucial importance in this context is the “health” of our hard disks. While a failure of any other component is likely to be anything from a nuisance to a major annoyance, none is as devastating as a hard disk failure; especially if we do not have a current backup available.

In the third quarter of 2004, when my laptop computer was running out of disk space, I finally installed a larger internal hard disk which I had purchased earlier in the year. Initially things seemed to be working fine, but when I accidentally hit the wrong buttons during data migration, I lost about one month’s data (e-mail, customer data, work completed, etc.).

Luckily (?), I did not have any other work in the queue, which was one of the main reasons why I endeavored to make the replacement. Nevertheless, I should have listened to my own advice and bought the proper tools (i.e. specialized software) before I proceeded, but since I had not, a variety of factors came into play.

Back then, I had backed up my current hard disk to an external, USB-connected disk, a SmartDisk FireLite, using the Windows Explorer copy function. As I was well aware, this has the undesirable side-effect that any files that are open at the time of the back-up cannot be backed up (a very annoying idiosyncrasy of the Windows operating system).

As a result, none of the core operating system files were backed up and I had neglected to use alternate methods to get them onto the external disk, too. To make things worse, I stayed up all night to monitor progress. When I rebooted the system, it believed that there were two bootable operating system partitions available and tried to synchronize them.

Unfortunately it elected to use the incomplete backup as the master, and for lack of an existing copy of the “SAM” user database (Windows XP), it wiped out the existing one to bring the two copies “in sync.” (Ouch!!!)

Now, from Windows NT, I was used to the Recovery Console feature, which – rumor has it – also exists in Windows XP. Well, it turned out that that is “sort of true;” it exists in XP Professional, but not in XP Home. Consequently, I was not able to fix the aforementioned problem using the Recovery Console, a feature reasonably well documented on Microsoft’s support pages.

The only option available to XP Home users is to do a System Restore to an earlier Restore Point, which can be quite helpful at times but requires the computer system to be in a state where the user still can boot into the operating system and access the corresponding feature. No such luck in my case.

There are a few other features not included with XP Home that can make a major difference. Among them is a backup utility (MS Backup), allowing the user to backup the system without having to revert to 3rd party software for said purpose.



Also, NTFS (NT file system) encryption of data/content on a file system level is only available in XP Professional; the feature is disabled in XP Home. While this might not sound like a big deal, it still strikes me as very important. A lot of us are dealing with sensitive customer data, which we would rather not see exposed anywhere, risking a lawsuit from any of our clients. Similarly our banking information, client databases, and personal documents would benefit from additional protection.

Well, ultimately I had to reinstall the system from scratch, including all applications, and copy all data files (e-mail, customer data, work, etc.) back to the old hard disk. Once this was done, I had a bit more space left than before since I did not reinstall a lot of applications that I had not used in more than two years.

One of the primary reasons for the attempted replacement was that the old disk had provided indications that it was on the verge of failing (illustrated by messages such as “delayed write of c:\some_directory\some_file.ext failed”).

These messages had disappeared for a few weeks after I reinstalled the system onto the old disk. The main reason for this peculiarity is that during the formatting of the disk, all sectors of the disk are scanned to see if they are readable. If they are not, they are flagged as “bad sectors” and therefore not used for data storage.

Nevertheless, once a disk has bad sectors, especially when these start to show up after years of operating the disk virtually non-stop, it is likely that more failures are going to show up within less than a year. Given that we do not know to which sector it might happen, and therefore are at risk of losing vital data, it becomes crucial to identify such looming failures early on.

That way, we can take corrective actions at our own pace, rather than whenever the situation arises, which – according to Murphy’s Law – would be at the worst moment possible, i.e. when we are working on an urgent task with an extremely tight deadline.

While the MTBF (Mean Time Before Failure) of hard disks produced in recent years is usually in the six digits, my disk started to show the problems after a mere 18-20,000 hours of operation. Yet, a major factor that should also be taken into account, is that a laptop tends to be rocked, moved around, sometimes banging into other objects while being transported, and such.

As a result, a laptop’s hard disk can deteriorate much faster, especially if it happens to be operating during any such events. Well, to make a long story a bit shorter, last year’s replacement hard disk developed disk problems within a mere month of operation, resulting in the loss of one month’s data.

I now wondered how to determine the health of my hard disks so that I could get an early indication of any potential problems. There’s good news: most hard disks produced in recent years are equipped with SMART, Self-Monitoring Analysis and Reporting Technology, and there is a variety of products available, some of them free of charge, to access status information the disk maintains regarding its “health.”

To learn more about this technology and to look for some SMART tools, I took a look at <http://smartlinux.sourceforge.net/smart/>. The download section of this site provides information about, links to and downloads of a variety of such utilities. I downloaded and installed all of the tools listed in the download section and subsequently settled on HD



Tune, a freeware product available at <http://www.hdtune.com>. This utility provides warnings regarding any disk-related SMART parameter that approaches critical mass, such as temperature or number of defects. Its memory “footprint” is sufficiently small, given that it uses only about 3.6 MB, thereby not affecting overall system performance. In my book, this is well worth it.

When a similar large (80 GB) laptop hard disk was on sale at CompUSA in February, I inquired how much they would charge for duplicating the data. Given that I was well aware of what little physical work was involved, we ended up in a discussion of why they wanted me to pay for the hard disk installation, which I was willing to take care of myself, just because they wanted to install it to verify that the duplication was successful.

I told them that I was not willing to pay for something I could do myself and offered to let them verify that the duplication was successful by installing the new disk, then taking it back out. I knew this would have effectively doubled their work, but they would have had it their way. Well, as you can imagine, this was a no go on their part.

Given that I had previously duplicated hard disks in IT work environments using Symantec’s Norton Ghost, I checked the price of that software, found a couple of external cases for the old hard disks, and ended up paying less for all the hard- and software than I would have had to shell out to CompUSA for labor alone.

Using the right tools, things were a breeze. The new Norton Ghost (9.0) finally incorporates a feature previously found in a few other, similar products, a component that installs at the very operating system core, allowing for backup of all files, even those that are currently in use.

The major advantage is that it is no longer necessary to reboot the computer from a floppy or CD-ROM in order to perform a full backup, but rather the backup can be made while the computer is running. I would still advise not be working on the computer, though, since it is so busy taking care of the replication that it is simply not conducive to work with it.

On the upside, rather than taking more than 14 hours (regular copy using Windows Explorer), or 4 hours (using dedicated backup software), the new Norton Ghost was able to copy 25 GB via an USB 2.0 connection in about half an hour.

I now replicate my laptop’s hard disk regularly, so that I always have a reasonably current backup at hand on a second hard disk that can be easily installed into a different laptop, allowing me to pretty much pick up where I left off.

Lessons learned:

- Trust your gut instinct; if you are sure you need a certain tool, get it.
- Don’t go cheap on backups; they are your life line.
- Consider upgrading to Windows XP Professional.

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Dictionary Review

e-Fachwörterbuch Elektrotechnik und Elektronik *e-Dictionary of Electrical Engineering and Electronics*

Englisch-Deutsch/Deutsch-Englisch

Edited by Professor Dr. Peter-Klaus Budig
Publisher: Langenscheidt,
in cooperation with Urban & Fischer
Approx. 150.000 headwords
CD-ROM (e-Wörterbuch) Version 4.0
ISBN 3-86117-203-8
Price: 179.00 EUR

by Traudel Mahaney



As a user new to e-dictionaries, I reviewed Langenscheidt's electronic version of Budig's dictionary with a primary focus on usability and intuitiveness of the user interface and pop-up functionality.

Langenscheidt's e-dictionary comes with a CD-ROM that includes German and English user manuals, both as Adobe PDF (Portable Document Format) and Microsoft Word files, and a short hard-copy user's guide (in German only). The installation instructions in the user's guide simply state to put the CD in the drive and follow the setup instructions. These instructions, however, omit the fact that, on some computer systems, setup.exe can only be accessed by clicking *Start* and *Run* first, followed by browsing for the computer's CD-ROM drive.

Although electric and electronic technology is not my field of expertise, I had access to several new (unfiled) German patent applications from the electronic field, which I used to test the software, thus using current technical terminology.

To start with, I took Langenscheidt's Guided Tour for e-dictionaries and subsequently tested some of the (ac)claimed features:

1. *Simply enter terms to be translated in the entry box.... You will see that even some terms which appear very simple to you have several different meanings and translations.* With the German language book activated, I entered the term "Bandbreite" in the entry box. I got 1 match in flexi-search (Bandbreite $f(Nrt)$ B, bandwidth (in Hz, 1/s; IEC 50-731-01-52) and 46 matches in the extended search (Headword list), i.e., an impressive list of word combinations, which can be easily scanned by using the scroll function. I also searched for the term "Blockschaltbild," and found "Blockschaltbild n (Dat, Rt)

block diagram; functional block diagram (*mit Darstellung der Gliedfunktionen*)” in flexi-search and “Blockschaltung *f* unit connection (*Kraftwerk*)” in the Headword list.

2. *Inflected forms are no problem for (Langenscheidt) e-Dictionaries either. The flexi-search option allows you to enter these forms in the entry box and quickly takes you to the dictionary entry with the correct translation.* I searched for the verb “versorgt” and found “versorgen *v* supply; feed,” as well as the corresponding noun and a list of word combinations thereof in the Headword list. I keyed in “abgekürzt” and found “abbreviated, reduced, shortened, abbreviated,” but it did not indicate the infinitive form of the verb, although “abkürzen” is listed in this dictionary.

3. *Even if you key a word incorrectly or are not quite sure how to spell it, the spelling-tolerant search facility means that Langenscheidt e-Dictionaries still finds the correct entry in the dictionary.* With both language books activated, I typed “Elektroretinography” into the entry box and actually got a direct match (elektroretinography *Elektroretinographie f*). This term is misspelled in the dictionary. I also entered “Blockscaltbild,” which did lead me to the correct entry, whereas “Blockshaltbild” did not.

4. *The pop-up search [also] quickly recognizes terms made up of several words and even entire expressions and takes you to the correct dictionary entry.* I highlighted “elektromagnetische Trägerwellen” in my text and activated the German-language pop-up function, which took me to “elektromagnetisch” and a list of more or less related word combinations. I found “Trägerwelle” and related terms by right-clicking on the word separately. I tried “Punktoxidation von Silicium” and found the correct translation. One should note that the pop-up function only works in one language direction, which must be selected in the pop-up search settings prior to using the function, whereas the other search options function in both languages simultaneously, as long as both language directions of the dictionary are open.

Since the research of abbreviations can be quite time-consuming, I tested the software in that respect. With both language books activated, I entered “UHF.” I found *uhf [u.h.f., UHF] ultrahigh frequency.* I clicked on “UHF” in the Headword list and found “UHF Ultrahochfrequenz.” I entered “Ultrahochfrequenz” in the entry box to see if I could crossreference the abbreviation, and I could (Ultrahochfrequenz *f (UHF) ultra high frequency, UHF (Dezimeterwellen, 300 Mhz - 3 GHz, nach DIN 40015 und VO Funk)*). I also tried LOCOS (local oxidation of silicon/Punktoxidation)) and was able to crossreference all three entries.

I also tried “MOA/metal-oxide arrester/Metalloxidableiter,” “RFI/ Hochfrequenzstörung/high-frequency interference,” “CMP/central monitoring position/zentraler Überwachungsplatz,” and “CVD-Beschichtungsverfahren/chemical vapour deposition,” and was able to crossreference all of them back to the abbreviation, by way of the full-text search.

Langenscheidt’s e-Dictionaries offer several search options, i.e., search in the headword list, flexi-search, extended search, and full-text search, all of which can be spelling-tolerant searches. A search selection can be made by clicking on the expert-search button (the one with the magnifier) to the right of the dictionaries on the top of the screen, or by pressing the shortcut key F3. It is also possible to search with wildcard characters by entering a question mark (for one letter) or an asterisk (for several letters.) For example, keying “inter?erence will lead to “interference.” This function works in Expert Search only.

I initially encountered problems when searching for words with umlauts. The program recognizes words with both the actual umlaut and its adapted version, i.e., “ü” as well as “ue,” or even just the respective vowel. For example, I keyed in all three versions of the verb “abkürzen,” with the following results:

“abkürzen” - abridge

“abkurzen” - abridge

“abkuerzen” – took me initially to “abkühlen.” After activating the “Match umlauts” option, I found “abbreviated – abgekürzt” and 16 matches in expert search, which included English phrases that contain the word “abgekürzt” in the German translation, as well as German word combinations.

When testing a word starting with an umlaut, I got the following results:
Übertragung - 1. transfer(ence); transmission, transmitting; 2. (*Dat*) translation; transcription (*vom Band*) plus 302 matches in extended search.

Uebertragung – took me initially to “UER.” After activating the “Match umlauts” option, I found “artificial carry (*Dat*) künstlicher Übertrag *m*” and 839 matches in expert search, which included English phrases that contain the word “Übertrag” in the German translation, as well as German word combinations.

The “Match umlauts” option can be found by clicking on the expert-search button (the one with the magnifier) to the right of the dictionaries on the top of the screen, or by pressing the shortcut key F3. This option must be manually activated before each use, which is somewhat cumbersome. Also, if the actual umlaut is to be used when entering a word starting with an umlaut in the entry box, one must either copy the word from the text and paste it in the entry box (by right-clicking the mouse!), or type Alt + the appropriate number on the number key pad.

In contrast, in the free Internet dictionary provided by the Technische Universität München (<http://dict.leo.org>), both the actual umlaut and its adapted version can be entered without a problem, both versions yielding the same results.

Frequent shortcut users may want to review the settings under View > Settings > Standard User Interface > Shortcut Keys. The default setting of Ctrl+Shft+B and Ctrl+B interferes with the keyboard shortcut for bolding text in the English version of Microsoft products. It may be prudent to change the settings to something different, e.g., Ctrl+Shft+Q and Ctrl+Q, respectively.

In general, I was quite impressed with the options an electronic dictionary offers. However, I am of the opinion that Langenscheidt could improve on the umlaut handling. Also, Langenscheidt’s instructions are not always very clear. Incorrectly spelled words will not always lead you to the correct entry, even when the spelling-tolerant feature is activated. Some of the options could be more user-friendly, for example, having to manually (re)set certain options before each use, and including the “paste” function in the Edit drop-down menu.

I found Langenscheidt’s e-Dictionary to be a wonderful, time-saving search tool, once it is properly set up and one has become familiar with the product. Its variety of search options, and the pop-up-search in particular, yield instant results, with an abundance of information at your fingertips, which is a great improvement over the paper versions. The pop-up search enables you to look up words in any text document by highlighting it and right-clicking the mouse. The translation is shown immediately on screen, together with an additional list window with a headword list (4-500; the number can be selected in the pop-up settings) and a scroll function that makes the pop-up search a fully-fledged dictionary application.

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Dictionary Review

Fachwörterbuch Technik und angewandte Wissenschaften

Englisch-Deutsch/Deutsch-Englisch

Author: Univ. Prof. Dr. phil. habil Peter A. Schmitt

Publisher: Langenscheidt, 2004

ISBN 3-86117-227-5 (Englisch-Deutsch)

2nd revised edition, 2155 pages

ISBN 3-86117-187-2 (Deutsch-Englisch)

1st edition, 2258 pages

Price: 129.00 EUR

by David A. Coats



Undertaking the review of such a voluminous pair of dictionaries, which have received glowing reviews from many sides, is a daunting task. There is much to like about these dictionaries, but in the end, I confess to finding myself somewhat disappointed. Langenscheidt's promotional literature quotes a number of extremely positive reviews:

“Das Buch des Monats ... Der Autor, Inhaber des Lehrstuhls für Sprach- und Übersetzungswissenschaft (Englisch) an der Universität Leipzig, legte bei der Erstellung des Wörterbuchs großen Wert auf eine klar strukturierte lexikographische Darstellung, was ihm auch gelungen ist. ... ” (*MTZ Motortechnische Zeitschrift / rei / 01/21/2002*). “I forecast, this dictionary will be in constant use by any busy translator. Comprehensive, reliable, and user-friendly: what more could anyone wish for?” (*Language International / August 2002*). “Der Band deckt einen außerordentlich großen Bereich zuverlässig ab; er ist modern gestaltet und wirklich benutzerfreundlich. ... Damit erhalten wir ein „Werkzeug“, das stets auf der Höhe der Zeit und der Kundenanforderungen gehalten werden kann. Ein Wettbewerbsvorteil für jeden technischen Übersetzer!” (*BDÜ LV-Hessen / Werner Siegel / 1/2002*)

The dictionaries are based on *Fachwörterbuch Technik und angewandte Wissenschaften* by Rudolph Walther, 5th edition. Entries from that dictionary were imported into the CATS relational terminology database, and then “adapted to the concept-oriented structure of the terminology database: i.e. all of the terms designating one concept are grouped into a single data record in the database. The vocabulary was also updated: obsolete and dispensable entries were deleted, while the vocabulary was enlarged to a final total of about 240,000 entries.” (Preface to the 1st edition).

The author reports collecting terminology from a “wide variety of sources.” Those include documents and terminology lists he has been collecting in the course of his work since 1974. He utilized course material from courses he taught at the Universities of Mainz-Germersheim and Leipzig, as well as terminological papers and theses of his students. He reports, in addition, “... thousands of sources – including stacks of catalogues, sales literature, countless sources in the Internet, and almost three decades of regular reading of specialist publications.” (Preface, *ibid.*).

The result is two 9.5" x 7" x 2.6" volumes with a total of 4413 pages of entries, plus 8 pages (10 in the G-E 1st edition) of very useful bilingual notes for users (though see the caveat below), and 4 pages of listings of subject fields. The text is in a sans-serif typeface, which is usually slightly less read-

able than a serif typeface. However, the generous amount of white space actually makes these dictionaries more readable than the serif typeface in Ernst (*Wörterbuch der Industriellen Technik*), the two-volume technical dictionary I would consider to be another standard reference work, and with which I will be drawing other comparisons. At the back of the E-G 2nd edition are 26 pages of technical abbreviations (2 columns/page) (20 pages in the G-E volume). These are extremely useful, and it is handy to have them grouped together. However, the meanings of the abbreviations are often not subsumed in the main listing of headwords. This can result in uncertainty that one in fact has the right translation (although for multiple meanings of the same acronym, the meanings are usually provided in the main listing). As a single random example, one finds “ACO <i&c> • Optimierregelung f; Anpassungssteuerung mit Optimierung f” in the headword listing, but has to go to the acronym listing to find “ACO adaptive control optimization.” If one already knows the meaning of the acronym (or has looked it up in the back), the translation can also be found in the headword listing under the full phrase. However, I find this preferable to Ernst, which lists the Acronym and equivalent as a headword, but then forces one to turn to the full phrase for a translation.

Each headword is listed on a separate line, with differing subject areas each listed on a new line. The most frequently used meaning is listed first [<tech. gen> or <tech. allg>], and the other subject areas listed in alphabetical order. Combined forms are then each listed separately below the root word. Context, or semantic information, is listed in parentheses after the subject area. For example, there are three listings of “Faser” in the G-E volume:

Faser *f* <tech. allg> (*Glas, Kunststoff, Mineral, Textil, Bio-*) • fiber US; fibre GB

Faser *f* <holz> • grain

Faser *f* <textil> (*endlos*) • filament

followed by approx. 150 combined forms with “Faser” (from “Faserabbau” to “Faserzwischenraum”). In comparison, Ernst has 5 translations of “Faser,” but only approx. 130 combined “Faser”-words. But of those Faser- words, Schmitt does not have “Faserpflanze,” whereas Ernst has both “Faserpflanze” and “Textilpflanze” (both terms for “fibrous plant”).

In examining these dictionaries, I compared glossaries we have prepared for technical translations with the presence of the glossary words in the Schmitt dictionaries, and also compared these with their presence in Ernst. (Of course, none of these glossaries relied on one source, and no single source could possibly have all the terms in any of the glossaries). Where there were multiple translations for a word, I compared the translations we had with those listed in Schmitt. Discrepancies between translations in Schmitt and translations we had acquired from other sources were noted. In some cases, other sources had a better translation, and in some cases, I preferred the translation offered in Schmitt.

In addition, I randomly sampled words throughout the dictionaries, for reasonableness and accuracy of the translations, and for typographical errors.

Schmitt notes that the most emphasis in these dictionaries was placed on mechanical and automotive engineering, followed by electrical engineering (including electronics and data processing), and “chemistry plus process engineering and chemical plant.” He notes that “Other fields, such as building and mining, are also covered, but not to the same degree of detail.” (Preface, *ibid.*). A recent translation of ours was concerned specifically with automotive control technology and computer diagnostics, and the glossary we prepared for that translation thus seemed a particularly fruitful source for comparison.

It was here that I encountered my first disappointment, resulting in the caveat noted above. Although Schmitt states in the “Notes for Users” and “Benutzerhinweise” in both the first and second editions “Entries are sorted in the usual order applying to computers, i.e., no account is taken of upper and lower case, numerals are placed before A, ß is sorted like s, and umlauts are ordered like the corresponding vowels with no umlaut,” and “... ß wird wie s einsortiert, Umlaute werden wie die entsprechende Vokale ohne Umlaut eingeordnet,” this is not true. ß is sorted like ss, and worse, the umlauted vowels are sorted like ae, oe, and ue. Thus, “Aquarium” is found 56 pages after “Äquivalent”! Only after I discovered this was I able to find some words I had mistakenly thought were missing from the

dictionary.

In the comparison related to automotive control technology, of 94 words I checked, Schmitt had 56 and Ernst had 41 – a clear advantage in favor of Schmitt. When I compared a glossary we had prepared for a translation having to do with liquid petroleum gas storage and handling, of 34 words I checked, Schmitt had 18, and Ernst had 29 – here a clear advantage in favor of Ernst. Both of those translations were into English. When I compared a glossary for a bottle packaging machine, with the translation into German, there was essentially no difference: of 55 words checked, both Schmitt and Ernst had translations for 29 of them. A slight difference was apparent where one dictionary had a translation of a word and the other did not: of 18 words that appeared in only one dictionary, 10 were lacking in Schmitt and 8 in Ernst. Given the small sample size, this is probably not a statistically significant difference. Obviously, neither dictionary is adequate as the sole source for translations.

Schmitt leaves out synonyms of the source words, in order to save space. He states that provision of the synonyms is not really necessary: "... someone looking for a translation of *fatigue limit* does not really need to learn that one can say *endurance limit* or *dynamic strength* rather than *fatigue limit* while looking it up. It is more important to know what possible translations in the target language are available for consideration: *Dauerschwingfestigkeit*, *Dauerfestigkeit*, *Schwingfestigkeit*, *Schwingungsfestigkeit*." Although he is correct that source-language synonyms are not absolutely necessary, synonyms of source words can be extremely helpful in finding exactly the right word in translating, particularly in searching backward from a possible target language word. Ernst has this feature, and we have used it very often.

My second disappointment came as I was using the G-E dictionary for a translation of educational credentials in landscape design. In the course of this, I was unable to find many terms that, I felt, should have been in the dictionary. In addition, there was an outright mistranslation. These omissions and mistranslations included:

- "Plandarstellung" ("layout presentation") and "Landschaftsplanung" ("landscape planning") were both missing.
- I was disappointed to not find "Ingenieurwissenschaften" ("engineering sciences," which does appear in Ernst) in a dictionary of "angewandte Wissenschaft."
- Four headwords down from the first appearance of "Schlammmentwässerung," the typo "Schlammerntwässerung" appears as a headword, with a context note that was not supplied with the correct headword: "(z. B. *Entschwefelungsanlage*)."
- Schmitt has "**Bodenkunde** f <geo> pedology; soil thsccc." Aside from the typo for "science," "pedology" is wrong. Pedology is, in its more common definition, "the systematic study of the physiological and psychological development of children." (Academic Press: *Dictionary of Science and Technology*). In its definition related to soils, it is much more narrowly defined than "Bodenkunde" – it is the study of soil development and taxonomy. And of course, since the dictionary is based on a computer database, the translation from English is consistent in its error: the only translation given for "Pedology" is "Bodenkunde."
- "Wasserkunde" (hydrology) is missing from the dictionary (Ernst has it), although Schmitt does translate "Hydrologie." That does not help much, though, if one is looking for a translation of "Wasserkunde."
- Schmitt has 8 different translations for "Abfall" (not counting combination forms); Ernst has 29. Ernst had "Abfallbelastung," which I had been searching for; Schmitt was lacking it.

My third disappointment came as I randomly paged through the dictionaries and examined words that happened to catch my eye. In this process, I discovered some typos, important omissions, and several mistranslations, one serious. Several examples follow:

- Schmitt has, as translations of "Anschlussdraht," "lead wire; connecting wire." These are not the same (I would use "Verbindungsdraht" for connecting wire). Ernst makes the translation clear:

- “**Anschlussdraht** *m* (eines Bauteils), Zuleitungsdraht *m* (Elek, Eltro) / lead (of a component), lead wire.”
- Schmitt has, for “Blaupause,” both “blueprint; cyanotype” and “diaz print; diazo copy; print”, but does not clarify that a diazo print produces blue lines on a colorless background (a white print – a “Weißpause,” which is not in Schmitt), whereas a blueprint produces white lines on a blue background. Ernst, in contrast, makes this clear.
 - For “Blattfeder,” Schmitt has “leaf spring; semi-elliptic [leaf] spring; half-elliptic spring; flat spring; cart spring *coll*”; Ernst has “leaf o. coach spring; compound spring; laminated spring; plate spring”; taken together, one obtains a pretty good range of translations.
 - Schmitt leaves out “Prussic acid” and “Formonitrile” in his translation of “Blausäure”: “hydrocyanic acid (HCN); hydrogen cyanide” (and is consistent in omitting those terms in the E-G volume). Granted, “formonitrile” is pretty esoteric, but one is quite likely to run into the term “Prussic acid.”
 - One finds “mains supply; mains connection” (the British terms) for “Netzstromversorgung,” “Netzanschluss,” and “Hausanschluss,” but there is not a trace of “electric or electrical service, service entrance” (the American terms). Ernst is no better in this respect. In fairness, I have yet to find an English-German dictionary that translates “service entrance,” though there must be one somewhere. On the other hand, Schmitt does provide both British and US terms for “Erdleitung”: “ground lead” or “ground connection” *US*; “earth lead” or “earth connection” *GB*.
 - Schmitt provides one translation for “Obduktion”: obduction. As far as it goes, this is technically correct. It is unfortunate that he has elected to omit context, however. He cites geography/geology as the sole subject area, but a far more widespread use of the term is in the meaning of “post-mortem,” or “autopsy” (where the term “obduction” would virtually never be used in English, although it exists). In the field of geology, obduction is a relatively uncommon phenomenon in plate tectonics, where an oceanic crustal plate is overthrust atop a continental plate (New Caledonia is one example). The process of subduction (which he does not translate) is far more common.
 - One of his translations for “brennbar” needs a usage note, to indicate that many people confuse the word “inflammable” to mean “not combustible,” and that it should be avoided in warnings. His translation reads: “**brennbar** *ugs* <quality.mat> (*fähig, unter festgelegten Bedingungen mit Flamme zu brennen*) • flammable *ISO 13943*; inflammable *coll*; combustible *rare*.”
 - In my random search, I noted two terms that have double, and completely contradictory meanings, where Schmitt only supplies one of the meanings. The first, “Untiefe,” means both shallows and immense depth (as Ernst indicates), but Schmitt provides only “**untiefe Stelle** *f* <nav> • shoal.” The second term is likely to occur more frequently in technical writing: “Verstellen.” This word can mean both adjustment and misadjustment, but Schmitt has only “adjustment” (Ernst has both).
 - In my further random browsing, I noted several typos, including the typo “vaccum desiccator” for Vakuumtrockner. I would expect occasional typos, but I found it alarming to encounter so many during random browsing.
 - Schmitt correctly notes the different spellings between the US and British translation of “Valenz”: valence in US usage, and valency in British usage. However, he then lists 23 combined forms for “Valenz” and only supplies the British term, such as “**Valenzschale** *f* <phys> • valency shell.”
 - I noted a serious mistranslation of “Vaseline® ”: “**Vaseline** *f*® <tech.allg> • petroleum jelly; K-Y jelly®.” Although petroleum jelly (which is non-water-soluble) is correct, K-Y jelly® is a water-soluble anal and vaginal lubricant. Substituting one for the other could cause serious problems. The translation from English to German gives only “Vaseline® ” for “K-Y jelly®.”
 - For “auxiliary pole shunt,” Schmitt has “Wendepolnebenschluss,” but for “auxiliary pole,” he has only “Hilfspot.” Budig, in *Fachwörterbuch Elektrotechnik und Elektronik*, has both “Hilfspot” and “Wendepol,” and it is puzzling why they are not both listed under “auxiliary pole” in Schmitt.
 - The pronunciation guide for the various “lead”-words is unfortunately sparse. The first “lead” head word is shown as “**lead** (Pb) [*led*] <chem.mat> (*plumbum metallicum*) • Blei *n* (Pb) *DIN 1719*.” The

next headword is shown as “**lead** <econ> (*in competition*) • Führung f; Spitze f.” One might conclude from this that the words pronounced [led] would be consistently so indicated, but only 10 of over 100 words that are pronounced [led] are indicated as such. Some are clear from “Blei” included in the translation, but quite a number are ambiguous; for example: “**leading** <mvhcl.rep> (*filling of dents*) • Verzinnen n.” And as noted above, because these dictionaries are admirably consistent in reverse translation, there is no pronunciation indicated in the G-E dictionary for the “leading” translation of “Verzinnen.” This word can be particularly tricky, and I clearly remember a translation we edited many years ago, involving power relays, in which the translator had rendered “connect lead wires to terminals A and B” as “Bleidrähte an Anschlussklemmen A und B anschließen.” (A little more knowledge of the subject might have also helped the translator).

The preparation of a dictionary of this scope and magnitude is an immense undertaking, and it is quite impossible to avoid some errors. The G-E dictionary is a first edition, and one should expect, perhaps, quite a few errors. However, the dictionaries are based on a dictionary that had gone through 5 editions, and one might thus expect a lower error rate. It is unsettling to find so many errors in a random search through a dictionary, and I was left wondering how many more errors there are scattered throughout that might affect the accuracy of our translations.

A final gripe I have, not specific to Schmitt, but of which this dictionary reminded me, is the poor quality of the binding of virtually all reference works I have encountered lately (with the notable exception of the *Chicago Manual of Style*). The G-E volume of Schmitt I received arrived with a half-inch tear down the back along the hinge of the front cover. Virtually all the dictionaries we have are bound with plastic-coated paper on cardboard, and are very susceptible to this sort of tear as they are constantly pulled out of the bookshelf (the *Manual of Style*, in contrast, is bound with cloth covering the cardboard). I believe that library editions of books are much sturdier, but are also prohibitively expensive for the average free-lancer. The *Manual of Style*, however, did not appear to have a significant price inflation due to its cloth binding, and I wish that the publishers of our translating tools could take into account the very heavy use we give their dictionaries. As reference works, they should withstand such heavy use.

In summary, Schmitt has produced a major work that can be very useful to the professional translator. As I noted at the outset, there are many things to like about this 2-volume work, including its broad scope, vast number of entries, consistency in both translation directions, and readability. However, given the omissions and errors, I believe it should not be used as the sole technical dictionary in a translation library. In conjunction with Ernst, or possibly Routledge or Elsevier (which I have not reviewed in detail – we have used them on occasion, but they are not in our personal library), and various more specialized dictionaries, such as Ferretti, *Wörterbuch der Datentechnik*; Wittfoht, *Plastics Technical Dictionary*; Bucksch, *Wörterbuch für Bautechnik und Baumaschinen*; a chemistry dictionary such as Hatier Verlag’s *Chemie und Chemische Technik*; and other similar dictionaries, however, a translator with some technical knowledge and understanding should be reasonably equipped to tackle many technical translations.

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Termine

Was	Wann	Wo	Kontakt/Informationen
ADÜ-Nord-Tage: Menschen-Märkte- Möglichkeiten	Apr. 8 - Apr. 10 2005	Lübeck, Germany	ADÜ-Nord Information: www.adue-nord.de
ATA, Financial Translation and Interpreting Conference	Apr. 29 - May 1	Jersey City, NJ	Information: ata-hq@atanet.org
NAJIT, Annual Conference:	May 13 - May 15, 2005	Washington, D.C.	Information: www.najit.org
Anglophoner Tag BDÜ Hessen	June 10 - June 12	Darmstadt, Germany	see announcement on page 14 in this issue of <i>interaktiv</i>
ATA, Annual Conference	Nov. 9 - Nov. 12 2005	Seattle, WA	E-mail: ata-hq@atanet.org Information: www.atanet.org

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