Introduction
We are living in a new age. This is always true, and so we have to continually reexamine our strategies for how we relate to the changing world around us. But this statement seems “more true” now than it has ever been, with the advent of the digital age and its enormous advances in the areas of information storage, access, and communication. These advances directly affect the field with which this paper is concerned, namely, Bible translation and distribution. These advances have been accompanied by profound changes in levels of worldwide education and multilingualism, in the relationships between cultures, and in the composition of the worldwide Church. In light of all of these, it is time to reconsider our approach to Bible translation.

The Traditional Approach
Soon after the modern Bible translation movement began around 80 years ago, a strategy was developed that entailed a linguistically-trained missionary going to a people group, spending a decade or two (or more) learning that group’s language, overseeing a translation of the New Testament into that language, then sending the manuscript off for printing and putting the resulting book under “all rights reserved” copyright, usually with a Bible society.

That strategy made sense for that time. The methods that were necessary to transfer biblical meaning into a new language and distribute it to a people group took a great deal of time and money. The knowledge necessary for the task was locked away in a few Western European languages. The church itself did not exist in most people groups of the world. It was necessary for a Western missionary to spend many years gaining the required knowledge and skills, then many more years taking those to the people group to produce a translation. Because of the large amount of money and time this process required, the translation produced was usually only of the New Testament. It was hoped that, through this process, people in the group would believe the message and a church would form in that group who would then use the translation. Sometimes this happened. Most of the time, it did not.

In the meantime, the world has changed. Yet most Bible translation programs follow basically the same pattern, and most languages still do not have a New Testament, let alone a Bible. In fact, at the current pace of Bible translation, this generation and

1 An earlier form of this paper appeared in the *Journal for Baptist Theology and Ministry* 12:1, Spring 2015 (26-36).
several more will pass away before most of the world’s languages have a Bible. As of 2019, after more than 80 years of enormous, concerted effort on the part of large missions organizations dedicated specifically to this task, there are still only 698 Bibles and 1,548 New Testaments translated out of 7,353 languages currently spoken in the world (an increase of 15 Bibles and 14 New Testaments over the 2018 statistics). That leaves 5,107 with less than the New Testament, and of these, 3,969 still have no Scripture at all. Meanwhile, the languages of the world continue changing so that translations done more than 30 years ago now need revision. The “countdown to zero” model that we have been using, implying that when the above statistics hit zero the job is done, is illusory. The wheel just continues to turn—there is no end point.

So, who will make these revisions in the ever-growing backlog of aging translations? The missionary linguists who organized the translation programs and oversaw the process from drafting to checking to typesetting to printing, along with all of their knowledge and skills and their organizations that funded everything, left decades ago. The physical translations, printed long ago, have deteriorated. Many of them have errors that have been identified over time. Many churches in these language groups consider that they do not have the skills or resources to do a revision. Others who are willing to do a revision find that they cannot legally do so because the copyright belongs to an organization that, for various reasons, refuses to allow it.

There is another rapidly growing backlog—the drafts of Scripture translations that are waiting to be checked. In the traditional model, a missionary linguist-translator oversees a translation that is then checked for accuracy by a Bible translation consultant. But these consultants are few in number, and the drafts being produced far outstrip their ability to review them. Added to this problem is the fact that much of the non-Western world is no longer willing to wait for the Western linguist/translator to come, learn their language, and translate the Bible for them. This is especially true for the thousands of groups that have been told to wait, but see no help coming. Because of this, many groups are going ahead and translating the Bible for themselves with no help from Bible translation agencies.

This has accelerated the existence of translation drafts at the same time as the number of consultants available to check them dwindles. According to one report, the next ten years will see a loss of 36% of the translation consultants worldwide. As a corresponding trend, the number of young people pursuing a career as a linguist-

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3 As of October 2019, according to http://www.wycliffe.net/statistics.
4 One possible way to deal with this problem is to designate large portions of this remainder as “no need” or “unlikely need” for Bible translation. We are finding, however, that many groups who have been put in these categories disagree with the designation that has been given them and do want the Scriptures in their language. This raises the question: Who has the authority to decide if a language group needs the Scriptures or not?
translator is also diminishing. It is becoming increasingly clear that the traditional, missionary-driven model will not achieve its goal of translating the Bible into each of the languages of the world in the foreseeable future.

As we step back and consider the lessons learned from this experience, it may be helpful to reconsider the goal itself. Should the goal be the existence of Scripture in every language, or should it be the establishment of the church in every people group? The finished Bible translations in hundreds of languages around the world that sit unused should convince us that Scripture production in and of itself is useless. The only way to achieve the former in a sustainable way is to work toward the latter. The local churches need to produce and maintain their own Scripture translations.

**How Has the World Changed?**

We have mentioned the diminishing missionary force from the West. Along with that negative change, however, there is a very positive one: the church has been growing dramatically in the rest of the world.

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6 Ibid., 3.
8 Figures 1 through 4 were created by Tim Jore. The data source for Figure 1 is Patrick Johnstone, *The Future of the Global Church: History, Trends, and Possibilities* (IVP Books, 2011).
An important implication of this change is that the practice of translating the Bible with no local church involvement (often because there was no local church) is no longer appropriate. The church has grown ahead of the translation of the Bible. In many language groups that do not have Scripture, believers are already there. There is general agreement that they need to be involved in the translation from the beginning, or the translation will not be used.⁹

Just involving the local church in the translation, however, doesn’t go far enough. The local church needs to have control of the translation. Their ownership of the translation needs to be real, not only “felt.” A colonial attitude that Western missionaries are doing the translation as a gift for the local church is not only ineffective, it is no longer tolerated. In order for Western missionaries to be involved in the translation, they need to be invited into a process that is truly owned locally.

Minority language groups are not as isolated as they once were. Mass media have reached into their areas, and they travel much more than their parents did, even internationally. This has accelerated the shift in cultural attitudes and greatly increased their level of multilingualism. In addition, there has been a large-scale increase in education levels among minority language groups. When missionary Bible translation began, it was rare to encounter people in minority groups with education beyond the elementary level. Now there are many with university and even advanced degrees. They are ready and able to take charge of their own Bible translation programs.

That brings us to perhaps the most profound change the world has seen in this generation—the advent of the digital age. Digital tools for content creation and distribution put enormous power into the hands of ordinary people. Previously, a translation team had to be a small group of people who could meet face to face and work on a manuscript together. They worked on it for many decades before anyone else could see it because it had to be as perfect as possible in order to justify spending the thousands of dollars required to employ a publishing house to make the large print run marking the end of the process. At that point the translation would never again be changed.

None of these things are true now. Access to translation resources and file sharing over the internet means that translation teams can be of any size and located anywhere. Information can now travel around the world instantly and with no cost beyond the infrastructure that now exists. If desired, anyone with a cell phone can see the translation at any stage and give instant feedback. Errors can be caught and corrected at any time, even after the translation has been distributed. Physical printing is optional and can be done by anyone at any time in any quantity desired.

⁹ Dye, 96.
Some of these advantages are now being exploited by missionary-led translation teams. But one crucial area has been overlooked—the digital age has given us the ability to create and distribute *Bible translation knowledge itself* to these teams, so that they can translate the Bible for themselves.

**The Gateway Languages Strategy**

The traditional model of Bible translation is a “push” model—it relies on someone learning each language of the world and then “delivering” the Bible into that language. The model we are adopting is a “pull” model, allowing the global church to “pull” resources to itself for Bible translation. But for this to work, the resources need to be in a language that each church group already understands. This may sound impossible at first, but it is made possible by the new multilingualism—the penetration of the languages of wider communication into every people group.

Almost all language groups, even very small ones, have at least dozens and probably hundreds of speakers who are also fluent in one or more languages of wider communication. We are estimating that there are around 50 languages of wider communication that touch all of the other languages of the world. We are calling these the “Gateway Languages.” If this is true, then we need to “push” the biblical content and the information needed for translation into only about 50 languages. Then all of this content needs to be made freely available in digital form and accessible on the internet so that the church in the smaller languages, no matter where it is, can “pull” the content to itself through its bilingual members. In that way the church in each language group
can be empowered to translate the Bible into its own language without waiting for someone to “deliver” it to them.

In the “push” model, only a few language groups can be reached due to the limitations of missionary resources. The rest are blocked by two things. First, the resources that they need are in a language that they do not understand, and second, they do not have legal permission to use, download, or translate the resources that they need. These two blockers have always been negotiated by the Western missionary who learned the minority language and who obtained licenses to the resources, either by purchase or through the mission agency. The missionary has been the gatekeeper, and the local church has been dependent on the missionary for all necessary resources. But once the two blockers are removed, the church will finally be equipped for the task of Bible translation.

So, this is our vision: to empower local church networks to end their own Bible poverty by creating unrestricted Bible translation resources, unrestricted training, and unrestricted translation tools that will be freely available in a language that they understand well.

**The Problem of Copyright Restrictions**

The previous section mentioned the two blockers and discussed how the first one, the language barrier, can be overcome by leveraging the patterns of multilingualism in the minority language groups. Biblical translation resources can be translated into the Gateway Languages to reach all of these language groups, but in order to do that, these resources need to be released from copyright restrictions. In the traditional model, Bible translators would gather a collection of Bibles and just translate from them. But with an internet-based model, that cannot be done. You cannot just put things on the internet that are copyrighted. It is amazing, but true, that almost every Bible translation and almost everything written as a help to Bible translation is locked down under all-rights-reserved copyright and, without permission, cannot be made available on the internet or translated and adapted for use by the global church. Perhaps even more amazing is the fact that, so far, very few Western mission agencies have been willing to give that permission by openly licensing their content for the use of the global church in Bible translation. We pray that this is beginning to change.10

We have found that the best way to release these resources is through the use of the Creative Commons Attribution-ShareAlike license (CC BY-SA). This license allows the translation and adaptation that the global church needs to do and locks the content open so that it can never be restricted again. It requires the user to give attribution to the source, and to share the content freely, whether unchanged or adapted, just as unrestricted as the user received it from the content creator. This is the license that makes sense for the internet age, and for works that were created for the express

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10 See [https://open.bible/](https://open.bible/).
purpose of helping the church to translate the Bible. All unfoldingWord materials are released under this license.\footnote{See \url{https://www.unfoldingword.org/license}. For more information, go to \url{http://creativecommons.org/licenses/by-sa/4.0/}.}

A Solution
Most people groups do not have access to the Bible translation agencies with all of their proprietary tools and resources. So, the solution that we are pursuing is to create Bible translation tools and resources that they can access and use in order to equip them with what they need so they can have confidence in the quality of the translations that they produce. Figure 4 illustrates what we consider to be an adequate set of Bible translation resources. These are not meant to substitute for the many excellent tools that others have created, but these are intended for the many groups that do not have access to those tools. In fact, if other agencies were to release their resources and tools under the CC BY-SA license, we would no longer feel the need to create our own.\footnote{For example, we did not need to create our own version of the Greek New Testament because of the careful work over the past decade by the Center for New Testament Restoration in producing an eclectic text released under the CC BY-SA license. See \url{https://greekcntr.org/home/index.htm}.}

Until then, we will continue creating a new set of Bible translation resources that will be permanently locked open for the use of the church. This means that anyone can take these materials, translate them, build on them, etc., as long as users attribute where they came from and continue to share them freely. So, we are not reinventing the wheel out of choice but by necessity, so that the church can use it freely. A description of the unfoldingWord tools and materials that have been developed so far follows.
Open Bible Stories
The aim of our resources is for the translation of the Bible, so it may seem strange that the first resource that we have created is a set of Bible stories. We did this because the Bible is one of the most difficult books to translate, but it is also the most crucial, since the church needs it. Furthermore, we are asking the church to translate the Bible even though they have not been trained to do that. So, we want to begin by training translators, and part of our training strategy is to encourage people not to start with translating the Bible but to begin with Bible stories. For that reason, we have created a condensed Bible overview called Open Bible Stories. It is a set of 50 key Bible stories that span from creation to the second coming of Christ. Each story is broken down into frames, and each frame has a picture and a few sentences of text. As well as being attractive, the picture helps the translator to understand the text. As people translate these stories, they are being trained in how to translate and in how to translate the Bible.

By starting with the Open Bible Stories, translators feel less intimidated than if they were translating Holy Scripture itself. What often happens with new Bible translators is that they feel that they must translate very literally, word-for-word, out of fear of “changing” the Bible, and so they produce very stilted, even unreadable translations. By doing so, they inadvertently change the Bible into an incoherent text rather than the powerful, clear message that it is meant to be. Translation involves a necessary change of form in

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13 The pictures were created by Sweet Publishing and are licensed under the Creative Commons Attribution-ShareAlike 3.0 license. See http://sweetpublishing.com.
order to retain the message that the original form contains. As the translators translate the stories, they learn from the helps provided that the translation must be clear and natural as well as accurate, and they get a lot of practice finding the right forms in their languages for doing that. Then, by the time the translators get to the Bible, they are used to the process of transferring the meaning of the text into the phrases and expressions that are natural in their own language. The translation helps we provide for Open Bible Stories are in the same format as those that we provide for the Bible. They are the translationWords definitions and the context-specific translationNotes, as described further below.

To summarize, we consider Open Bible Stories to be an excellent training text for Bible translation for these reasons:

- It allows the translator to start with text that is easier. It is narrative, with simplified vocabulary, grammar, and sentence structure. The pictures also guide the translator toward the correct meaning.
- It deals with biblical themes, so as the translation team encounters ideas that may not be native to their culture, they can discuss and experiment with ways to express them before they arrive at translating the Bible text.
- It is not the Bible. This allows the translator to relax and avoid the pious urge to carefully (and woodenly) translate the Bible word for word. By the time the translation team finishes the 50 stories, they should have developed good habits of meaning-based translation.

Figure 5: Open Bible Stories
• The Open Bible Stories are integrated into the rest of the Bible translation tools so that, as the translation team translates Open Bible Stories, they are learning how to use the same tools that they can continue to use as they translate the Bible.
• It provides a framework for understanding the details that will be encountered later in Bible translation.

The stories are valuable for more than just training, however. They are very useful for evangelism and for introducing the major concepts of Scripture into a culture for the first time, and the pictures are attractive to people of all ages. It is also a complete work that can be produced relatively quickly and distributed to the community, creating a lot of excitement for the Bible translation process and interest in having the Bible itself. In addition to print, the Open Bible Stories can be distributed in audio and video formats that can be shared between cell phones and tablets.  

The unfoldingWord Literal Text (ULT) and unfoldingWord Simplified Text (UST)
After a translation team has completed the 50 Open Bible Stories (OBS), we invite that team to begin translating the Bible. The process will be familiar, using the same tools. There will be one big difference, however. Rather than one source text, there will be two. This is because the Bible itself is much more complex than OBS, and the translator has to do a lot of work negotiating between the form and the meaning of the original. To help with that, we have created a set of two Bible translations in English, to be translated into the Gateway Languages, one of which is focused on revealing the form of the original and the other of which is focused on revealing the meaning.

The unfoldingWord Literal Text (ULT)
The two translations are designed to be used together as Bible translation source texts. The ULT is designed to stay close to the forms and expressions of the Hebrew, Aramaic, and Greek originals. It is based on the American Standard Version of 1901, a text in the public domain, which we have updated and edited to reflect modern English usage. At the same time, we have also carefully compared it to the originals and made the text as literal as possible within the constraints of English grammar and with the further constraint that the text be understandable English. Figures of speech and other idioms are retained as much as possible and explained in the translationNotes (see below). In this way, the translator is able to see how the original was put together, including the presentation of ideas and use of figurative language, and then to translate in the same way if his or her language also contains a similar convention. If the ULT presents a form that would not work in the target language, however, then the translator can look to the UST and the translationNotes for other ideas of how to express that meaning.

14 See https://www.openbiblestories.org/.
15 This follows the approach recommended in Katharine Barnwell, Bible Translation: An Introductory Course for Mother-Tongue Translators (SIL, 2002), 15.
The goal of the ULT is for translators who don’t know the original languages to be able to see the way that the original languages expressed the biblical concepts. This includes, as much as English allows, representing the original language terms in a consistent way. The idea is that this should be the next best thing to translating from the original languages themselves. One of the things that a translation consultant does with a minority language team is to explain what the original language says. We intend for the ULT to fill much of this role.

The ULT is literal with the above constraints; it is not an interlinear-type translation. It seeks to avoid misleading the translator as interlinears tend to do. Translators who use interlinears and who don't know the original languages tend to impose a grammar that they do know on the interlinear text. This tends to produce meanings that are incorrect. The ULT seeks to avoid this by representing the original vocabulary and expressions literally but also using English grammar. Wherever this results in a strange or difficult expression, there will be a translationNote to explain it more clearly.

*The unfoldingWord Simplified Text (UST)*
The unfoldingWord Simplified Text (UST) focuses on the meaning rather than the forms of the originals. It is based on the *Translation for Translators* by the late Ellis Deibler, who incorporated his many decades of experience as a translator and international translation consultant with Wycliffe Bible Translators to express the text in plain, clear English. He licensed it for the use of the global church under the CC BY-SA license. The overarching goal of the UST is to present the meaning clearly. It uses short sentences, avoids complex or difficult grammar, avoids abstract or verbal nouns, and changes figures of speech and idioms into plain language. In this way, translators can see what the meaning is behind the figurative language and can then use a figure from their language that conveys that meaning. It fills in subjects and objects where they are lacking. It rearranges the presentation of the text in some places into a logical or chronological order. It also includes some information that is implied by the text where we have judged that it is:

1. necessary to understand the text
2. known by the original hearers or readers
3. assumed by the original speaker or author

We do not recommend that a translation team translate directly from either of these versions alone, but use them in conjunction with each other as a way to view both the form of the original and its meaning. The two versions are like different lenses, each giving a slightly different picture, that when used together produce a much fuller, “3-D” view than either can do alone. Having more than one version as a source keeps the difference between form and meaning always before the translators, giving them ideas for different ways to express the same meaning, and freeing them from following the
form of any one version too closely and thus producing a foreign-sounding, stilted, or even unreadable translation.

In partnership with various teams around the world, we are working to translate the ULT, UST, and associated translation resources into the Gateway Languages. We consider these two translations to be the minimum required to do accurate translation. We also invite other Bible agencies to release their translations under the CC BY-SA license so that translators worldwide can add them to their set of resources. Having more examples of forms in which certain meanings can be expressed helps translators to think of how to express those meanings in their languages. We are designing our tools so that they can incorporate these translations as they become available.

**translationNotes**
The unfoldingWord translationNotes (UTN) are exegetical notes that provide historical, cultural, and linguistic information about the Bible text. The Notes are tied to phrases in the ULT. Each Note repeats the phrase that it comments on and then provides an explanation of the difficulty in that phrase and/or different ways that the phrase might be translated. A Note may also refer to a translation idea found in the UST. Each Note is written for the specific phrase that it comments on so that it is maximally relevant to the context at hand, many of which are unique. Each Note is limited to one topic, to minimize confusion and to help the translator to sort out the different issues that may be at play in the same context.

The Notes also contain links to relevant topics in translationAcademy (see below), such as to an explanation of metaphor or active and passive voice when the translator has arrived at a verse with that issue. In this way, the Notes seek to provide the help that a translator needs precisely in the context where the help is needed. We call this “just-in-time” information. For example, if a translator is translating a verse that contains a metaphor, the Note will explain the meaning of the metaphor, give some examples of how to translate it, and also link to the translationAcademy article explaining what a metaphor is. If the translator doesn’t know that information or has forgotten it from some linguistic training long ago, the information is immediately available in whatever depth the translator needs at the time of translation. This allows translators to choose just the amount of information necessary to help them make the best possible translation decisions. The translationNotes provide an important bridge between the translation resources. They comment on the ULT, refer to the UST, and link to pertinent translationAcademy articles.

**translationWords**
The unfoldingWord translationWords (UTW) resource contains definitions of difficult concepts. Similar to the translationNotes, the translationWords are tied to a passage of the ULT. UTW is a list of words from the passage that may be difficult to understand or translate for any of the following reasons. We provide UTW definitions of words that are:
1. **Theologically freighted.** They carry a lot of theological weight and meaning, so it is important to get them right and be consistent in using them. Even if they aren't difficult (although they usually are), they are important. Examples: righteousness, forgiveness, sin, grace, love.

2. **Unusual or obscure.** These are words that a speaker of English as a second language is unlikely to have encountered before. Examples: abomination, eunuch, iniquity, propitiation, chariot.

3. **Have a modern usage but a different ancient/biblical usage.** In order to translate with the correct meaning, it is important that the translator not import a modern or foreign meaning into the ancient context. Examples: altar, priest, bless, curse, clean, unclean, church.

4. **Unique to the Bible.** These are words that are only used in the context of the Bible. Examples: Ark, gentile, psalm, tabernacle.

5. **Transliterated.** These are unique to the Bible because they were never translated in the first place. Examples: shekel, ephah, amen, apostle, angel.

6. **Ambiguous.** That is, concepts are lumped together into one English word so that it is unclear which concept is being accessed in any certain context of the ULT. The job of UTW in this case is to disambiguate the terminology of the ULT for the translator. Examples: call, fear, age, great.

Like the translationNotes, the translationWords are provided in a “just-in-time” format so that translators can see the definition as they come to a word in the text that they are uncertain about. Whenever a translator has trouble with a word from the ULT text, he or she can click on the word in the UTW list. This will bring up a definition of the word, a section of translation suggestions, a list of passages where the word occurs in the Bible and also in the Open Bible Stories, and a list of related words that the translator can also click on to go to the page for that word. This latter feature provides some of the benefits of a semantic domain dictionary, so that the translator can compare similar words, understand the differences between them, and contemplate the overlap with words in his or her own language. For translators who already understand the words well, there is no need to click on the words and the UTW articles do not intrude. Names of biblical people and places are included in a separate category of UTW to help translators keep track of who or what they are.

Unlike translationNotes, new translationWords definitions are not written for each context. The definition is applied wherever the term occurs in the Bible or OBS. Where terms are ambiguous, however, the UTW definition that appears will be specific to the meaning of the term as used in that context. The strength of UTW for checking is that it allows you to see all examples of a term in one place and compare your translation of that term in each place for appropriateness and consistency.
As previously stated, the UTW definitions are for the terms that are used in the ULT. They are not definitions of original biblical language words.\(^\text{16}\) As the ULT is translated into the Gateway Languages, the Gateway translationWords resource will be based on the terms that are used in the Gateway Language Literal Text. This will entail making adjustments between English and the Gateway Language to account for the different vocabularies with different ranges of meaning.

The reason that UTW is based on the Gateway Language is that this is the source language for the minority language translation. Most minority language translators will not reference the Greek and Hebrew. Therefore, it is more important that translators understand well the meaning of the words used in the source text that they are translating than that they understand the meanings of Greek and Hebrew words that are not in the source text and that they are not translating. For example, it is more important that translators translating from English understand the meaning of “eternal” in the context of “eternal life” in Titus 1:2 than that they grasp all the nuances of the Greek word αἰώνιος. Does this mean that a minority language translation should never be checked against the originals? Of course not. We are also providing tools for the church to do exactly that. But that is a different stage of the process.

**translationQuestions**
The unfoldingWord translationQuestions (UTQ) resource contains questions and suggested answers that are provided for each of the Open Bible Stories and also for each chapter of the Bible. They are a tool that can be used for community comprehension checking. The questions can be answered from the passage alone, without any further knowledge of the Bible. A member of the translation team can read a passage to a community member, ask the questions, and compare the person’s answers to the suggested answers. If the answers are significantly different, this signals to the translation team member that the translation may not be communicating clearly at that point, and he or she can investigate the issue further. The translationQuestions can also be useful for exegetical checking, since a wrong answer may be due to an inaccuracy in the translation.

**translationAcademy**
The unfoldingWord translationAcademy (UTA) is a set of concise teaching modules on topics pertaining to translation, checking translation, and how to use the technology tools. We are assuming that most of the people who are using UTA have not gone through a formal Bible translation training program and will need some direction. In UTA, therefore, we intend to provide the basic knowledge required to enable anyone anywhere to learn how to translate the Bible into their own language, check it for accuracy, and use the tools with confidence.

\(^{16}\) Separate unfoldingWord lexicons will be developed for that purpose if no one openly licenses a good set of lexicons for the use of the church.
UTA backstops all of the other resources as a translation knowledge bank that explains the approach of the other resources and that the other resources can point the user to for more in-depth information on any topic that they address. It is constructed as a series of learning modules that present the principles of good translation, the basics of how to assemble and manage a translation team, how to handle language difficulties, and specific topics about biblical culture. Each module is typically one to two pages in length and is intended to provide the answer to a single practical question pertaining to the process of effective Bible translation. A person could gain an overview of Bible translation by reading the lessons one after another, but they are designed so that the translator can access them as they become relevant to the translation task.

The modules that are especially designed to work this way are the modules dealing with translation issues such as the various figures of speech. As translators encounter these as part of translating or checking, our tools make the specific module for that type of translation problem available for the translator to learn more about it. Each module contains an explanation of the issue, reasons why it can cause problems in translation, strategies for how to translate it well, and examples of those strategies applied. We believe that this kind of “just-in-time” learning is the most effective way to help the translator. That way, translators don’t have to try to recall what they learned about a topic in a training session long ago, but can get the training as needed, apply it, and move on. Currently, the modules of UTA are in written form, but we hope to start adding video lessons soon.

**translationStudio**

One of the platforms that integrates all of the resources for translating is translationStudio. This is an app that runs on Windows, Mac, and Linux computers as well as Android devices. It is open-licensed software with no fees or strings attached. Once downloaded, the software can be used and shared offline. It is designed to be simple to use. In the current design, there are three icons down the left side. Clicking the first puts the app into Reading Mode. In this mode, the user can read any source text that has been downloaded. This is useful for becoming familiar with a Bible book or the larger context of a Bible passage. At the present time, we have available: translations of Open Bible Stories in many languages, as well as an original biblical language text and the text of the ULT, UST, and the *Translation for Translators*. More translations will become available as they are completed.

When the user clicks the second icon, the app goes into Translation Mode. In this mode, the source text appears as one small “chunk” of text at a time – a single frame of Open Bible Stories or two or three sentences of Bible text. The translation philosophy behind this is that this is the amount of text that the translator can internalize. When the translator has internalized the chunk, then, with a click or a swipe of the finger, a blank page will appear, ready to receive the translation. The blank page covers the source text.

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17 Available at [https://www.unfoldingword.org/translationstudio](https://www.unfoldingword.org/translationstudio).
text, so that the translator must translate from the information that he or she has internalized, rather than by looking at the words of the source text. This technique produces a more natural translation because the translator has mentally processed the information and, in doing so, has reordered it into the forms and sequence that make sense in his or her language, and that is how it comes out in translation. If the translator were still looking at the source text, he or she would have a strong tendency to follow the forms and sequence of that text, producing an unnatural translation. The natural translation will be corrected for accuracy at the next step.

When the user clicks the third icon on the left side, translationStudio goes into Review Mode. In this mode, the source texts are visible alongside the translation, and the translationNotes and translationWords can slide in from the right side. The Translation Notes also contain links to pertinent modules of Translation Academy. In this mode the verse markers appear and can be placed into the text by the translator. In Review Mode, the translation can be compared to any of the source texts available, and the user can also review all of the translation helps that apply for each chunk of text. Here the text can easily be edited by clicking on the pencil icon.

Door43
Door43 (https://door43.org) is an open-access website that we provide for biblical content storage and distribution. It is the workbench website, containing all of the works in progress—translations and resources alike. This is where anyone can go, search by language, and pull down any resources that exist in that language. Door43 is designed for translation work in every language in the world, with automatic revision control and distributed backup. The architecture of Door43 allows users to collaborate together online, as well as use tools like translationStudio to work offline and then synchronize translated content to Door43 for further checking and publishing.

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18 For clarity of presentation, source and target translations in the screenshots are both in English.
**translationCore**

translationCore is the tool that we have designed for checking Scripture translations. Like translationStudio, it can read and write to the user’s repository on Door43 and it can also be used in offline mode for environments where using the internet is difficult or dangerous. Files can be saved for upload until the user has opportunity. Through translationCore, we seek to put into the hands of speakers of the target language much of the knowledge that a consultant brings to a checking session in a format that is easily accessible. translationCore gives the user access to the original language texts as well as various Gateway Language (GL) translations to compare with the target translation. translationCore currently contains 3 checking tools: the translationNotes tool, the translationWords tool, and the Alignment tool.

**translationCore translationNotes Tool**

As you might guess, the translationNotes tool is based on the translationNotes resource. This resource would have been used to inform the translator about specific issues in the text when creating the translation draft in translationStudio. For that purpose, the Notes were presented in verse-by-verse format so that translators could refer to them as they created the draft text. Since checking a translation is just a matter of checking that the translation was done well in the first place, the information that is used to check a translation is the same as the information that was used to do the translation. But in translationCore, the presentation of this information is pivoted, so that all of the checks of the same type are grouped together. This gives users a different perspective on the text, allowing them to see things that they might have missed in a verse-by-verse view.

![Figure 7: The translationCore translationNotes Tool](image-url)
The translationNotes checks are grouped under the categories: Culture, Discourse, Figures of Speech, Grammar, and Other. The user can select one or more of these categories to check or can select any combination of individual checks under these categories. In this way, the checking task can be spread across a large team and people on the team can specialize in one or more types of checks, as desired. If a translation team decides that a particular issue, such as passive voice, is not a problem for a target language, the check for that issue can be deselected.

Each of the items to be checked is presented by book in the order of appearance and in the scriptural context. The context-specific Note about the issue appears in the middle bar, and the more extensive explanation of the general issue (the translationAcademy article) appears on the right side of the screen. At the top of the screen is the Scripture pane containing the verse under scrutiny in any of the languages and versions that the user has selected from those currently available. As the Literal and Simplified Texts are translated into the Gateway Languages, they will become available to appear in this pane for comparison. To see more context than a single verse, the pane can be expanded.

One of the very useful features of translationCore is the highlighting that appears in the Scripture pane. The phrase being examined is highlighted in every version that has been aligned (see below), including the original language. Through this, users can see which phrases are equivalent across the various versions. This helps them to verify that their translation is similar and can give them some ideas of good options if they think that their translation could be improved. It also provides a check against the original language phrase. Those who don’t read the original language can still click on the words in the phrase and see a gloss for those words in the chosen Gateway Language.

The user is asked to consider the information in the Note and highlight (select) the phrase in the target translation that corresponds with the phrase in the Note. Then the user is presented with the selected phrase and asked, in light of the Note and other information, if the target phrase is a good translation of the source phrase. If so, the user marks the check as done. If not, the user can edit the text or make a comment for someone else to review.

translationCore takes the phrase that the user selects for each check and adds that text to the list of completed checks on the left side of the screen. There, the user can see at a glance how all of the instances of a check, such as doublets, have been translated. translationCore keeps track of what has been checked and provides an indication of progress for the user or any supervisor. If the user needs more help, he or she can flag a check and/or leave a note in the comment field. The translation team can then discuss these Notes together, or a translation consultant can use these to quickly see the problem areas and offer solutions.
The translationWords tool is based on the translationWords resource that provides definitions of the biblical key terms as well as other terms that might be difficult to translate. It works much like the translationNotes tool. There are three categories: Key Terms, Names, and Other. Any of the categories can be selected or deselected for review. Like the translationNotes tool, this tool pivots the same data that was used for translation drafting and now presents it to the user for checking with all of the instances of the same term grouped together. This is especially useful for checking the consistency of the translation of these terms.

After a checker has made the selection for how each term has been translated, a reviewer can easily see all of the translations for each term in the left-hand column and check any that seem to be different from the rest. Checking the Names category in this way is useful for checking the consistency of spelling, as well as for checking that the correct name is in the correct place and that the translation policy has been consistently carried out, such as to transliterate, borrow, or adapt in another way.

A concise definition of the term being checked appears in the middle bar, and the full article for the term appears on the right side, including the translation suggestions for the meaning in this context and the sample list of where this term occurs in the Bible and OBS. The user is asked to select the term that is the translation for the Gateway Language term in focus, then is presented with the two terms together and asked if this is a good translation in light of the definition given. If yes, the user moves to the next check and translationCore adds the translation to the list of completed translations in
the left column. If no, the user can edit the text or flag the check and/or leave a comment for someone else to review.

As in the translationNotes tool, the term being examined is highlighted in the Bible versions in the Scripture pane, including the original. This can give users a variety of ideas for how to translate the term, and they can click on the highlighted word of the original language to gain some insight into the meaning of the original term. This quick check of the original term can serve to confirm a translation that was based on the more in-depth definition of the Gateway Language term. If it does not, the translator can add a flag or comment for the translation team or a consultant to review.

translationCore Alignment Tool
The third tool in translationCore is the Alignment tool. This tool allows the user to match the words and phrases of a Gateway Language text with those that have a corresponding meaning in the original biblical language. This shows how the translation communicates the meaning represented in the original. The goal is to match up the smallest segments of meaning that correspond between the two languages. The original language words are on cards in the main field, and the Gateway Language words are on cards in a column to the left. The user then simply drags the Gateway Language words onto the original language words.

<table>
<thead>
<tr>
<th>English (EN) Target Language</th>
<th>Kolbe Greek (UGNT) Original Language</th>
<th>English (ULT) Gateway Language</th>
<th>English (KJV) Gateway Language</th>
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<td>Titus, a true son in our common faith. Grace and peace from God the Father and Christ Jesus our Savior.</td>
<td>To Titus, γινηκαί τίμημα καὶ καυχήσεως πίστεως; γὰρ ἐν τῷ χρίσματι τοῦ θεοῦ Πατρὸς καὶ Χριστοῦ τοῦ οὗτος γενόμενον.</td>
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Figure 9: The translationCore Alignment Tool; Titus 1:4 of the ULT

The words of either language can be merged together as necessary to create the segments of meaning that best match the other language. If there is text left over in the Gateway Language text after matching all of the original language segments, the user must ask if that Gateway Language text is necessary or if it is an addition that should be deleted. If there is original language text left over, the user must ask if this still needs to be translated or if the meaning is already expressed in a part of the translation that was aligned elsewhere. If so, the alignment may need revision. In this way, the user can see where the Gateway Language translation may have deviated from the original.
For the Gateway Language Literal text, this provides a very good check to see if the Gateway Language text is truly as literal as it could be. A completely literal text would match its words with the original language text one-to-one. Of course, this is never completely achievable, but if the Gateway Language Literal text requires a lot of merging in order to align it, the user must ask if there might be a more literal way to translate it that still makes sense in the Gateway Language. For the Gateway Language Simplified text, aligning takes more work because of the explanatory nature of the Simplified text. But aligning is still a good check to make sure that all of the meaning of the original is present and no more implied information is included than is necessary.

The Alignment tool is the tool that empowers all of the other tools. It is because of the aligning process that translationCore is able to provide the highlighting of corresponding words and phrases in the other tools. All of the correspondences are saved in memory, and all alignments of all translations are done to the original languages. This means that there are no “second generation” or chains of alignments, such as Hindi to English to Greek. This makes it possible to show the user what words and phrases are equivalent across as many languages as have been aligned and in any combination of languages. This also opens the possibility of easily creating other tools such as concordances, interlinear Bibles, and simple Bible dictionaries in whatever language combinations are desired. All of the Gateway Language translations of the ULT and the UST will be aligned, and we invite copyright holders of other Bible texts to openly license their texts to allow them to be aligned as well.

Originally, we had envisioned the Aligning Tool as only a way to make the other tools work in the Gateway Languages. But then we saw its value as a check on the accuracy
of the translations. So now we recommend it as part of the checking process for all language translations if they have people who can read the original languages.

Through the use of these tools and others to be developed, we intend to place into the hands of the global church a robust and extensive checking method. This method can greatly increase the abilities of a translation team to produce a translation of high quality independently of a translation consultant. Alternatively, it could allow them to greatly reduce the workload of a consultant if one is available to them.

**Book Package Flow**
The creation of Bible translation resources and tools is a complex process requiring teams of people with specialized knowledge in the fields of translation, linguistics, biblical studies, theology, and computer programming. It requires concerted, coordinated effort over a considerable amount of time. Yet, church networks of the world want all of this, and they want it yesterday.

We started out working on one resource at a time because that seemed efficient. But no one was able to use one resource by itself—the whole package was required in order to be truly useful for Bible translation. So, we have switched to a new method that we are calling Book Package Flow. We are working on all of the necessary resources simultaneously, but for one book at a time. In that way:

- we can release the whole resource and tool package for a single book
- we can train the Gateway Language team how to translate it
- the Gateway Language team can teach it to minority language teams
- the minority language teams can use it to translate the book into their own language.

Then we can work on the package for another book and keep moving the packages through the pipeline of trained teams. This is actually more efficient. The best news: It keeps the minority language churches from being further frustrated by the phrase that they have been hearing for years: “Just wait.” They now have the tools that they need to translate Scripture with confidence.
translationCore Create

In order to facilitate the translation and creation of open-licensed translation resources for the use of the global church, we are creating a tool called translationCore Create. translationCore Create provides an easy way to translate and adapt the unfoldingWord resources into any language. Figure 11 shows the translationNotes resource of the book of Titus ready for translation. There is the familiar Scripture pane across the top, displaying the Gateway Language versions as selected by the user. The phrase for a particular note is highlighted in the versions in the Scripture pane, and also displayed below. The left side below the Scripture pane displays the source version of the resource, and the right side displays it again in an editing window, ready to be replaced by the target language version.

![Figure 11: translationCore Create](image)

We expect that many things in the English source versions of the resources will not apply in many Gateway Languages and so will need to be adapted or deleted. Other things will need to be added. This is where that will happen. translationCore Create allows sections of the resource to be changed, deleted, or added. It also allows users to see exactly which part of the resource they are translating and keeps track of where each part belongs. That way, as soon as the translation is finished, it is already in the proper format to be used in the drafting and checking tools.

The unfoldingWord tools can use any Unicode font. Our team has also recently enabled translationCore with the ability to use complex scripts such as for Bengali and Classical Arabic. This will soon be incorporated into translationCore Create and later into the next generation drafting tool.
Conclusion¹⁹
This paper has attempted to show that, in light of the world-wide changes in culture, education, technology, and the growth of the church, we, as a Bible translation community, need to change the way that we do Bible translation. We can no longer do Bible translation for the global church. That approach is unwanted, and it will never reach the goal. We now need to shift to empowering the global church to do their own Bible translation by transferring the resources and knowledge to them. In order to do that, two obstacles need to be overcome: the language obstacle and the copyright obstacle.

At unfoldingWord we are proposing a way forward—creating open-licensed Bible translation resources and tools and translating them into the Gateway Languages. This goal is achievable if Bible translation entities will work together with church networks to share their knowledge and resources. Once the resources have been unlocked and used to train church networks to train others, the result will be exponential. Local bodies of the global church will finally be enabled to translate the Bible for themselves, in perpetuity. The era of handing people fish is over. It is time to teach them to fish.

¹⁹ For further discussion of the issues in this paper, see the collection of whitepapers at: https://www.unfoldingword.org/publications-home