Morse telegraphy - a product of the international community.

(This is a translation from the original text which is in German language)

The true origin of Morse telegraphy is of great importance, as it is ideally suited for inclusion in UNESCO's Representative List of the Intangible Cultural Heritage of Humanity. Belgium, the Netherlands, and Germany have already succeeded to have Morse telegraphy included in their respective national lists of intangible cultural heritage. These nationally recognized intangible cultural forms were assessed according to the requirements laid down in the UNESCO Convention for the Safeguarding of Intangible Heritage. These national intangible cultural forms must meet certain criteria for their holders to apply to their respective national UNESCO commission for a nomination to UNESCO. Upon nomination, UNESCO decides on the inclusion of Morse telegraphy on the Representative List of the Intangible Cultural Heritage of Humanity for that member state under the Convention for the Safeguarding of Intangible Heritage. (There are also multinational nominations submitted jointly by several countries, with one country designated as the main nominator and the bearer of the cultural form.)

Around 1838, the Americans S. Morse and A. Vail devised a code for all letters for transmission over electrical lines and subsequently demonstrated its practicality. Such a weather-independent communication system was highly valued in the vast expanse of the USA at that time, particularly on the railroads. However, the necessary skill to generate Morse code by hand was very difficult to learn, as each letter/number had to be deciphered using three electrical currents of varying lengths. Nevertheless, this "Morse telegraphy" spread throughout North America and gradually into other countries.

Around 1851, the Hamburg telegraph inspector Clemens Gerke was tasked with converting the existing purely optical semaphore telegraph line between Cuxhaven and Hamburg into a weather- and time-of-day-independent Morse code connection, based on the system of S. Morse. In this work, Gerke did not adopt Morse's encoding. He reworked the encoding of all characters (excluding the letter "e," which was represented by a dot and still is today) so that all letters and numbers were composed of only two different character components. These were a short-duration optical, acoustic, or electrical positive component (namely, a "dot") and a three-times-longer optical, acoustic, or electrical positive component (a "dash"). The pause between two separate positive components (dots or dashes) had the same length or duration as a short positive component (a "pause"). This Gerke code was very quickly much easier to learn for users of Morse code communication via overhead lines, underground cables, submarine cables, and optical blinker connections (heliography) than the Morse code, which was also called the "Continental Code" in North America and continued to be used there for a long time.

Before 1865, as communication via semaphore signals became increasingly widespread across borders in several countries, international coordination was necessary. Electrical wired communication, which was beginning to spread internationally, also gained traction. Thus, in 1865, the first "International Telegraph Union" was founded in Paris. At its very first conference (also in Paris), it agreed on the basic principles of C. Gerke's telegraph alphabet as a globally uniform standard. However, the conference did not adopt several of Gerke's telegraphy codes but established its own. In this now internationally standardized telegraph code, strictly speaking, only the original encoding by S. Morse, with a "dot" for the letter "e," remained.

Thus, the new telegraph code, in use since 1865, was created from components:

- by S. Morse (with his basic idea and the retained encoding only for the letter "e"),
- the encoding system of the German C. Gerke for about half of the letters of the alphabet,
- and with separate encodings (based on Gerke's system) for the other half of the alphabet,
- and with separate encodings for the 10 digits, which were replaced by the 20 participating countries of the 1865 conference.

For whatever reason, the International Telecommunication Union (ITU) has retained the name "Morse code" for this telegraph code, which remains valid to this day.

Based on the basic principles of the ITU Morse code, several countries have, over the years, developed codes tailored to the specific requirements of their national languages, such as Arabic, Chinese, Greek, Hebrew, Japanese, Korean, and Cyrillic. Thus, the Morse code, still maintained and managed today by the International Telecommunication Union under Recommendation "Rec. ITU-R M.1677-1 International Morse code," and formerly under ITU Recommendation "F.1" for wired communication, has been useful to all peoples of the world. There is no country where this Morse code has not been used in some form. Until about half a century ago, the international Morse code served several radio services and prominent international organizations in fulfilling their tasks (e.g., the International Committee of the Red Cross – ICRC, the International Association of Lighthouse Authorities – IALA, the International Police Association – IPA). It was and still is very helpful that the direct transmission of information using Morse code avoids the pronunciation problems that can often lead to misunderstandings in spoken communication. Furthermore, the many abbreviations, consisting of just a few Morse letters or numbers, have
led to a kind of global radio language, which has also contributed to unambiguous mutual understanding. -
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Even today, the distress signal SOS is known as a globally standardized identifier for a sea, air, or land vessel in immediate distress. Except for its largely obsolete professional use in marking radio beacons with slowly keyed two- or three-digit Morse code letters in aviation and maritime navigation, Morse code is now only used voluntarily in amateur radio. The International Amateur Radio Union (IARU) encourages its continued use through various Morse code applications.

Around 1840, S. Morse received patent USA 1647A for his Morse code system. The ITU, in its "ITU-R Patent Statement and Licensing Declaration Information," lists recommendations that have patent implications. The currently valid Morse code recommendation is not mentioned therein. This further clarifies that the Morse code in use since 1865 does not correspond to the one in S. Morse's US patent.

All these data and facts produce the following two key results:

1. The Morse code created by the ITU in 1865—despite the name "Morse"—is not the "Morse code" patented by Samuel Morse in the USA, which was later also known as the "Continental Code."
2. The new telegraph code (Morse code) created in 1865 by the ITU and the 20 founding member states is based on the codings of the German C. Gerke and their subsequent adaptation to country-specific characteristics. It is a collaborative effort of the international community under the leadership of the ITU.

These facts may also have understandably led Belgium, the Netherlands, and Germany to refrain from nominating Morse telegraphy to UNESCO on behalf of their respective countries. The nomination of Morse code by one country to UNESCO could justifiably cause "irritation" at the ITU and several other countries. It is therefore obvious that Morse code should also be designated as intangible cultural heritage for all countries. The ITU is ideally suited to this task, as it is not only the primary creator and still the administrator, but also represents all nations with regard to telecommunications. It was only in 2004 that the ITU added the Morse code for the internet address symbol, (the @ symbol).

Several years ago, the former president of IARU Region 1 (Mr. Don Beattie) sent a letter to UNESCO requesting that Morse code be included in the "Representative List of the Intangible Cultural Heritage of Humanity."

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Although Mr. Beattie did not receive a reply, at least UNESCO is aware of the issue.

The author of this report therefore recommends that the ITU enter into a dialogue with its UN sister organization – UNESCO. Such cooperation is recommended in their respective foundational

documents and in those of the UN. If the goal were to have the ITU listed on the Representative List of the Intangible Cultural Heritage of Humanity, the International Amateur Radio Union would certainly help to prepare the nomination and, after its listing with UNESCO, to report on its preservation activities. While not of primary importance, it is nevertheless of interest that UNESCO can provide financial assistance to organizations whose intangible cultural heritage is listed.
(See: Convention for the Safeguarding of Intangible Heritage – Chapters V and VI).

For more than 10 years, the three world-wide IARU regions have advocated for the preservation of the ITU Morse code and for the recognition of (modern) Morse telegraphy as intangible cultural heritage. Nevertheless, only the three aforementioned countries of IARU Region 1 have achieved national recognition by their respective national UNESCO commissions. In Germany, representatives of the amateur radio service and the maritime radio service jointly achieved this. In September 2026, IARU Region 1 held its triennial regional conference. At this conference, the Dutch Amateur Radio Union (VERON) again issued a document calling for national recognition of Morse telegraphy in other countries (conference document: VI26-C3-03 rev1). At this IARU Region 1 conference, in agreement with the representatives of the IARU as a whole, there was consensus that the IARU (its Administrative Council) should address this matter to the ITU. To further raise awareness of the Morse code as intangible cultural heritage, an explanatory note in the current "Rec. ITU-R M.1677-1 International Morse Code" would be appropriate. Such a note could read as follows:

"The significance of the International Morse Code as a professional form of global communication has largely ceased. Its preservation as intangible cultural heritage according to UNESCO principles is recommended".

A proposal submitted by the IARU (as a whole) through the relevant ITU bodies could lead to its consideration by the responsible "Working Group 5" at the ITU, with the drafting of an amendment to the Morse Code Recommendation, for submission to the next competent ITU World Administrative Radio Conference (WARC)." With such a statement from the ITU, representing all countries, in the current Morse Code Recommendation, it would be easier for efforts in all countries to at least achieve recognition of Morse code as intangible cultural heritage at the national level.

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But the ITU would also have a strong argument to submit a nomination to UNESCO itself.

Compiled in November 2026 by the author Norbert Gabriel, who himself holds the relevant radio operator certificates for the maritime, aeronautical, and amateur radio services (DJ7ZY).